



2009

KYOWA HAKKO KIRIN GROUP
SUSTAINABILITY REPORT

KYOWA KIRIN

The English edition of the Kyowa Hakko Kirin Group Sustainability Report
is distributed online only.

Kyowa Hakko Kirin Group Sustainability Report 2009 Highlights

This report introduces the social contribution and environmental activities of the Kyowa Hakko Kirin Group, which was launched in October 2008 following the merger of Kyowa Hakko Kogyo and Kirin Pharma.

The Shared Goals of the People of Kyowa Hakko Kirin

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A report on this year's stakeholder meeting

■ Editorial Policy

In the first half of the Kyowa Hakko Kirin Group Sustainability Report 2009, we cover corporate governance, corporate ethics, community relations, employee relations, social contributions through business activities and other aspects of corporate social responsibility. In the second half, we focus primarily on environmental performance. In compiling this report, we referred to the Environmental Reporting Guideline of the Ministry of the Environment and the Responsible Care Code. Further, in July 2009 we held a stakeholder meeting at the Yamaguchi Production Center Ube, at which we obtained stakeholder opinions concerning ecosystem protection activities. We sought out third-party verification to improve the reliability of information contained in the report. We also included in this report the opinion of an expert in the field about its overall concept.

■ Scope of the Report

The information contained in this report covers production, sales and R&D sites in Japan as well as production and development sites in other countries (See Page 8).

Environmental load and social performance data were gathered from Kyowa Hakko Kirin Group production and R&D sites in Japan, production sites overseas (Biokyowa, Shanghai Kyowa Amino Acid) and Kirin Kyowa Foods, which became an equity-method affiliate, and its subsidiaries (Kyowa F. D. Foods, Ohland Foods, Wuxi Xiehe Food, Kyowa Foods (Jiangyin)). Green Office Plan data for sales sites in Japan have been integrated. In consideration of its specialized business, we have recorded separately the environmental activities of Daiichi Fine Chemical.

■ Period Reported

The periods covered by the report are fiscal 2008 (April 1, 2008 to March 31, 2009) for operations in Japan and calendar 2008 (January to December) for overseas operations. Data for fiscal 2009 are included in some results.

Linkage with the Corporate Website

<http://www.kyowa-kirin.co.jp/english>

This report can be viewed on the Kyowa Hakko Kirin website.

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A year has passed since the establishment of the Kyowa Hakko Kirin Group. We are vigorously advancing toward the achievement of our vision of creating a “Japan-based, leading world-class Japanese research and development-centered life sciences company focusing on pharmaceuticals with a firm foundation in biotechnology.”

Seeking Breakthroughs as a Group

In the pharmaceuticals business, synergy from the merger of Kirin Pharma and Kyowa Hakko has been demonstrated not only in the increased sales of existing mainstay products by our combined sales force of 1,400 medical representatives, but also in research and development, which is focused on high-priority areas. Also, in the past year, Kyowa Hakko Bio has further reinforced its pharmaceutical raw materials and intermediates business as well as pharmaceutical-related businesses, such as amino acids for infusions and medical foods. Kyowa Hakko Chemical, operating in an extremely adverse business environment, is vigorously implementing a transformation to a business structure that is less susceptible to economic slowdowns by making the most of its strength to deliver environment-friendly and other high-value-added products to a broad spectrum of customers in Japan and overseas.

Global economic conditions have changed faster than anyone could have imagined, and in all of our businesses we must not only apply regional perspectives focused on Europe, North America or Asia, but also view and consider issues from a global perspective. Even if the current adverse economic climate persists, the Kyowa Hakko Kirin Group will hold to our business plan. We believe that, as a highly specialized company possessing competitive technologies protected by strong patents, we can create the high-value-added products that support reliable, sustained growth.

Contributing to Society as a Team

A company cannot grow by organizations or systems alone. I believe that it is people, and the organizational climate they create, that focuses the power of an organization to maximum effect. In the pharmaceuticals industry for instance, teamwork assumes maximum importance, ranking much higher than the power of individuals. Astonishing sums of money and a staggeringly long period of time must be expended to take a potential new drug from discovery to market. If any single process, from research and development to production, marketing and distribution, is inadequate, the goal cannot be reached. Also, for each and every research project, collaboration among a variety of departments is required in exploration, pharmacology, safety, metabolism, drug formulation and R&D. Furthermore, many unsung heroes labor behind the scenes, such as employees who dedicated themselves to assistant work in the laboratory.

In implementation of the merger, we held exhaustive internal discussions of the matters we thought should be emphasized and developed them into “Sharing Values, Aims, and Ideals—Team Kyowa Hakko Kirin.” This document, which sets forth the purpose of the company, includes the words, “Let us aim to become the ultimate team. No matter how talented an individual may be, alone he or she is hardly perfect. Let us take our energy, enthusiasm and pioneering spirit to join as one. Through our combined strength, we can

Kyowa Hakko Kirin Group Management Philosophy

The Kyowa Hakko Kirin Group companies strive to contribute to the health and well-being of people around the world by creating new value through the pursuit of advances in life sciences and technologies.

Kyowa Hakko Kirin Group Vision

To create a Japan-based, leading world-class Japanese research and development-centered life sciences company focusing on pharmaceuticals with a firm foundation in biotechnology.

Kyowa Hakko Kirin Group Action Guidelines

- We will work together in a sincere and mutually respectful manner.
- We will take a forward-looking, energetic approach to change.
- We will do our utmost to add value and contribute to a brighter future around the world.
- We will always act with integrity in everything that we do.

yield unimaginable solutions. This is what we want to show the world.”

We engage in business activities supported by vast numbers of people with the mission of providing society with as many beneficial new drugs as possible, and as quickly as possible.

Coexisting with the Earth as a Company that Bears Responsibility for the Future

The 21st century has been called the age of the global environment. This is because people have come to recognize that nature is not limitlessly renewable. Human activities emit more carbon dioxide (CO₂) than the Earth can absorb. That is to say, as we enjoy the benefits of affluent living, we are accumulating CO₂ in the atmosphere. For the past decade or so, the cornerstones of our environmental activities have been greenhouse-gas emission reduction and zero emissions, principally at our production plants. Furthermore, since last year, we have participated in watershed forest conservation activities as a member of the Kirin Group. This activity enables us to experience together with our families the wondrous things that water creates within ecosystems and encourages us to be deliberate in our use of water, nature’s most precious natural resource.

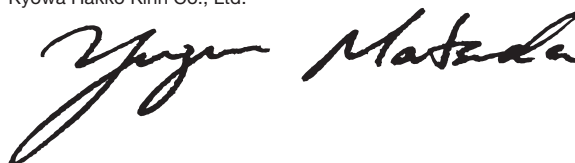
The field of biotechnology has developed through the harnessing of the life force and blessings of nature, such as microorganisms and sugars. I think that the Kyowa Hakko

Kirin corporate spirit of pursuing advances while respecting and appreciating the power of nature is appropriately symbolized by the stone monument erected at the Yamaguchi Production Center Hofu to express appreciation for small forms of life (microorganisms) that confer many benefits on humankind.

I would like to conclude with some remarks about corporate social responsibility. For a company to discharge its social responsibility, its corporate activities must be incorporated within the social framework and must benefit society. In other words, a company has worth only within the framework of society. The Kyowa Hakko Kirin Group will carry on with activities to create high-value-added products that benefit society, as well as efforts to be a low-carbon corporate group that does its part to protect the global environment. I request your continued guidance and encouragement.

October 2009

Dr. Yuzuru Matsuda
President & Chief Executive Officer
Kyowa Hakko Kirin Co., Ltd.



To Promote the Health and Well-being of People Everywhere

The shared aspiration of everyone at Kyowa Hakko Kirin is the desire to benefit patients by more rapidly delivering good medicine. That aspiration is a powerful driving force behind the effort to create pharmaceuticals that contribute to people's health. Our aim is to bring smiles to the faces of as many patients as possible, never forgetting the responsibility, enthusiasm and spirit of inquiry required of those who perform work that saves lives.

"We control the protection and utilization of intellectual property."

"We vigorously engage in research activities to create a better tomorrow."



Michio Ichimura

Innovative Drug Research Laboratories,
Tokyo Research Park

We perform discovery research of pharmaceutical lead compounds from among the metabolic products of microorganisms in the discovery research section. Microorganisms survive by generating substances that suppress the growth of or kill surrounding organisms. Nature contains substances as yet unimagined by humans, some of which may well prove beneficial in the treatment of cancer, communicable diseases and other ailments. Ordinarily, more than ten years is required from lead compound discovery to (perhaps) the completion of a new drug. We are facing the challenges with hope that our current research will someday prove beneficial to society.

Yosuke Yamaura

Intellectual Property Department

The Intellectual Property Department is deeply involved in all business processes, from the research and development of pharmaceuticals to production and market introduction. Our mission is to protect intellectual property important to the company, such as compounds with original structures, manufacturing methods and so on. We constantly consider ways to contribute to the business using intellectual property at every stage of the drug discovery lifecycle, from lead compound discovery to bulk pharmaceutical production technologies and the formulation of drugs. Our work also includes registering and maintaining trademark rights of easy-to-remember names for new drugs.

“We work with the health of patients foremost in mind.”

“We produce and procure materials essential to MR activities.”

“We serve as the pipeline that links pharmaceuticals with the front lines of healthcare.”



Mayumi Nagata
Production Department, Fuji Plant

Since pharmaceuticals are products that directly bear on the health of patients, quality assurance down to the level of individual tablets and individual vials is a prerequisite. At our workplace, we perform visual inspection of injectable drugs. We persevere in our role as the last bastion of quality assurance, ever aware of the patients to whom the products are administered. In addition, the Fuji Plant implements JUMP activities (for business process quality improvement). In the event that an equipment defect occurs, we cooperate with production workers and construction contractors in the implementation of improvements and development of machines that are easy to use and resistant to human error.

Aki Yoshikoshi
Purchasing Department

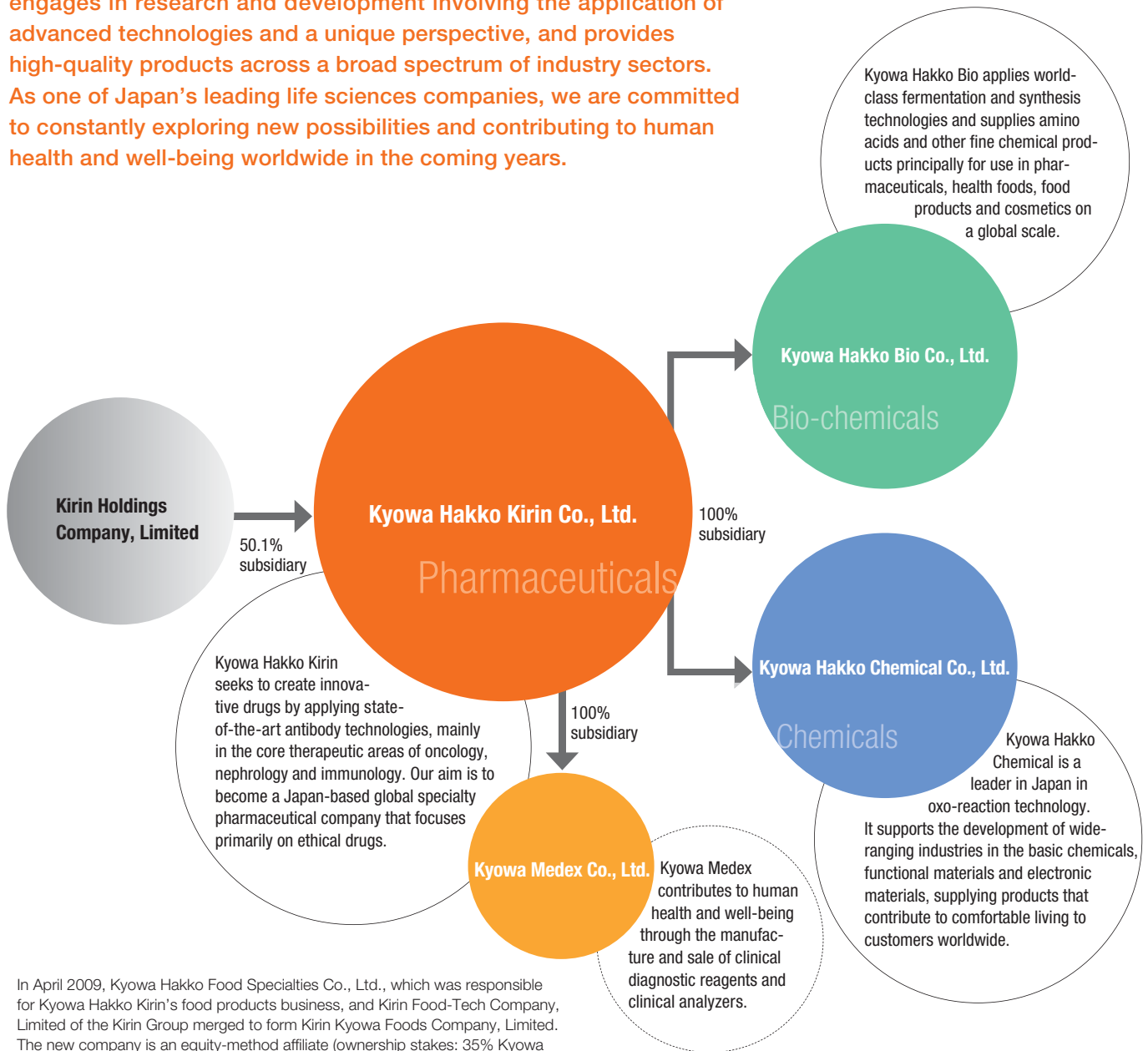
We are responsible for ordering from suppliers the materials necessary for MR activities, such as sales promotion and lecture materials. While scheduling deliveries is important, we must also consider designs that are visually pleasing and easy to understand for the healthcare professionals who use our products. Since these materials contain information concerning pharmaceuticals, they are subject to rigorous internal checks against standards such as ethical codes. The provision of excellent materials is work that requires the ability to respond to customer needs, ensure quality and secure favorable prices.

Nobumichi Takatsu
No. 1 Tokyo Sales Office, East-Tokyo Branch

Our job is to deliver information on the efficacy and side effects of pharmaceuticals to the healthcare professionals who prescribe Kyowa Hakko Kirin products. Since we handle many types of medications, including drugs to treat kidney disease, cancer, central nervous system disorders and allergies, and my territory includes highly specialized university hospitals, each day I study new information. I have opportunities to hear evaluations of our products in my day-to-day interaction with customers, which at times provides a deep sense of fulfillment and satisfaction.

Overview of the Kyowa Hakko Kirin Group

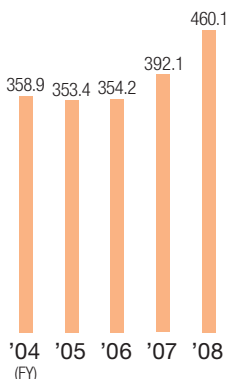
Biotechnology is a field that still holds enormous latent potential. The Kyowa Hakko Kirin Group engages in three businesses that have biotechnology as their foundation: the core Pharmaceuticals and Bio-chemicals businesses and the Chemicals business. The Group engages in research and development involving the application of advanced technologies and a unique perspective, and provides high-quality products across a broad spectrum of industry sectors. As one of Japan's leading life sciences companies, we are committed to constantly exploring new possibilities and contributing to human health and well-being worldwide in the coming years.



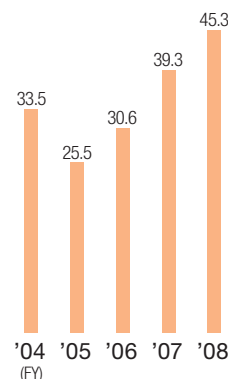
In April 2009, Kyowa Hakko Food Specialties Co., Ltd., which was responsible for Kyowa Hakko Kirin's food products business, and Kirin Food-Tech Company, Limited of the Kirin Group merged to form Kirin Kyowa Foods Company, Limited. The new company is an equity-method affiliate (ownership stakes: 35% Kyowa Hakko Kirin, 65% Kirin Holdings). In January 2011, the company will become a wholly owned subsidiary of Kirin Holdings Company, Limited.

Consolidated Financial Data (Kyowa Hakko Kirin)

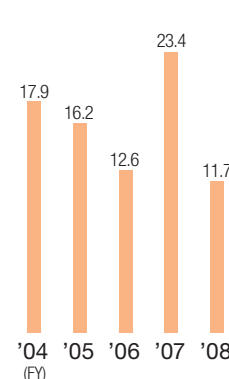
■ Net Sales (Billions of Yen)



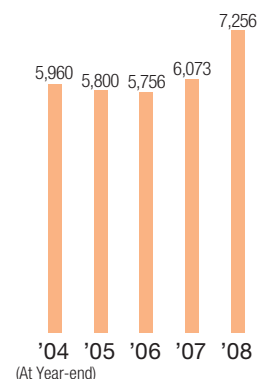
■ Operating Income (Billions of Yen)



■ Net Income (Billions of Yen)



■ Number of Employees (At Year-end)



Corporate Data (As of October 1, 2009)

Corporate Name	Kyowa Hakko Kirin Co., Ltd.
Established	July 1, 1949 (Name changed from Kyowa Hakko Kogyo upon the merger with Kirin Pharma as of October 1, 2008.)
Paid-in Capital	¥26,745 million
Representative	President and CEO Yuzuru Matsuda
Head Office	1-6-1, Ohtemachi, Chiyoda-ku, Tokyo 100-8185, Japan TEL: +81-3-3282-0007
Number of Employees	7,256 (Consolidated), 4,206 (Non-consolidated) (As of March 31, 2009, Kyowa Hakko Kirin)

Principal Consolidated Subsidiaries

Kyowa Hakko Bio Co., Ltd.,
Kyowa Hakko Chemical Co., Ltd., Kyowa Medex Co., Ltd.

Industry Segment

- **Pharmaceuticals:** Manufacture and sale of pharmaceuticals and clinical diagnostic reagents
- **Bio-Chemicals:** Manufacture and sale of pharmaceutical and industrial-use raw materials, health care products, agrochemicals, products for livestock and fishery industries and alcohol
- **Chemicals:** Manufacture and sale of solvents, plasticizer raw materials and specialty chemicals
- **Other:** Wholesaling and transportation

Business Bases

Production Bases

<In Japan>

Kyowa Hakko Kirin Co., Ltd.

Fuji Plant, Takasaki Plant, Sakai Plant,
Yokkaichi Plant, Ube Plant

Principal Consolidated Subsidiaries

Kyowa Hakko Bio Co., Ltd. Yamaguchi
Production Center Hofu, Yamaguchi Produc-
tion Center Ube, Healthcare Tsuchiura Plant

Kyowa Hakko Chemical Co., Ltd. Chiba
Plant, Yokkaichi Plant

Kyowa Medex Co., Ltd. Fuji Plant

Other Consolidated Subsidiaries

Daiichi Fine Chemical Co., Ltd. Headquarters
Plant (Takaoka, Toyama)

<Outside Japan>

Kyowa Hakko Kirin Co., Ltd.

Kirin Kunpeng (China) Bio-Pharmaceutical
Co., Ltd. (Shanghai, China)

Kyowa Hakko Bio Co., Ltd.

Biokyowa Inc. (Missouri, U.S.A.)
Shanghai Kyowa Amino Acid Co., Ltd.
(Shanghai, China)

Principal Laboratories

<In Japan>

Kyowa Hakko Kirin Co., Ltd.

Fuji Research Park (Fuji Plant, Shizuoka),
Tokyo Research Park (Machida, Tokyo),
Frontier Laboratory (Takasaki, Gunma), Bio
Process Research and Development Labora-
tories (Takasaki Plant, Gunma), Drug Formu-
lation Research and Development Laborato-
ries (Fuji Plant, Shizuoka), Chemical Process
Research and Development Laboratories
(Sakai Plant, Osaka)

Kyowa Hakko Bio Co., Ltd.

Technical Research Laboratories (Yamaguchi
Production Center, Yamaguchi), Tsukuba
Development Center (Tsukuba, Ibaraki)

Kyowa Hakko Chemical Co., Ltd.

Yokkaichi Research Laboratories
(Yokkaichi Plant, Mie)

Kyowa Medex Co., Ltd.

Research Laboratories (Fuji Plant, Shizuoka)

<Outside Japan>

Kyowa Hakko Kirin Co., Ltd.

Kyowa Hakko Kirin Pharma, Inc.
(New Jersey, U.S.A.)
Kyowa Hakko Kirin California, Inc.
(California, U.S.A.)
Kyowa Hakko Kirin UK Ltd. (Berkshire, U.K.)
Hematech, Inc. (South Dakota, U.S.A.)

Principal Sales Bases

<In Japan>

Kyowa Hakko Kirin Co., Ltd.

Headquarters, Sapporo, Tohoku,
East-Tokyo, West-Tokyo, Chiba-Saitama,
North Kanto, Koshinetsu, Yokohama,
Nagoya, Tokai, Osaka, Keiji-Hokuriku, Kobe,
Chugoku, Shikoku, Fukuoka and
South-Kyushu branches

<Outside Japan>

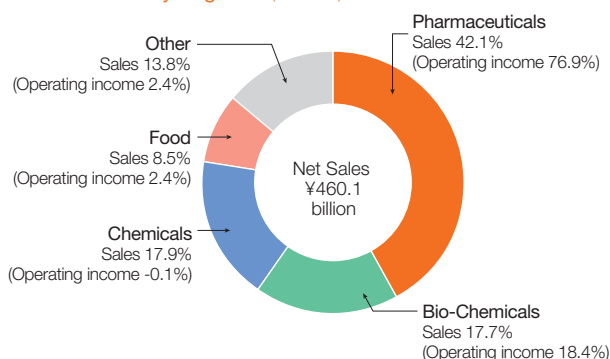
Kyowa Hakko Kirin Co., Ltd.

Kyowa Hakko Kirin (Hong Kong) Co., Ltd.
(Hong Kong, China)
Jeil-Kirin Pharm. Inc. (Seoul, Korea)
Kyowa Hakko Kirin (Taiwan) Co., Ltd.
(Taipei, Taiwan)

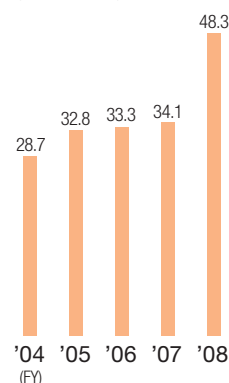
Kyowa Hakko Bio Co., Ltd.

Kyowa Hakko (Hong Kong) Co., Ltd. (Hong
Kong, China)
Kyowa Hakko U.S.A., Inc. (New York, U.S.A.)
Kyowa Hakko Europe GmbH
(Dusseldorf, Germany)
Kyowa Italiana Farmaceutici S.R.L.
(Milano, Italia)

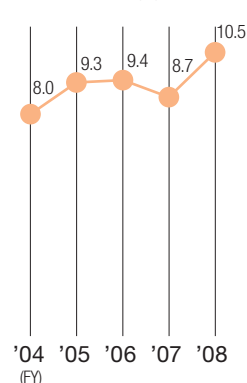
■ Sales and Operating Income Composition by Industry Segment (FY2008)



■ R&D Expenses (Billions of Yen)



■ R&D Expenses to Net Sales Ratio (%)



Basic Approach to Corporate Governance

We have conducted our business based on the Kyowa Hakko Kirin Group Management Philosophy of striving to contribute to the “human health and well-being worldwide by creating new value through the pursuit of advances in life sciences and technologies.” We have established the management organization and structures to implement the necessary measures to realize this philosophy. We recognize that increasing management transparency and strengthening management supervision are essential for continuous growth of corporate value and, therefore work to enhance corporate governance.

Strengthening Corporate Governance and Internal Control

The Board of Directors and the Board of Auditors are the foundation of Kyowa Hakko Kirin’s system of management institutions. The Board of Directors consists of seven directors, of whom one is an outside director, and five corporate auditors, of whom four are outside corporate auditors (as of June 25, 2009). In accordance with audit policies determined by the Board of Auditors, the corporate auditors attend important meetings, including meetings of the Board of Directors. They also audit the performance of the directors’ duties by surveying corporate operations and finances. The Company has established the Group Management Meeting and introduced an executive officer system to ensure efficient management decisions and rapid decision-making and has established the Advisory Board (consisting of four outside advisors) to strengthen the management structure and increase management transparency and soundness.

The Board of Directors periodically reviews its policies on system development to ensure the appropriateness of business operations (internal control systems), promote their progress and foster continuous system evolution. The Internal Audit Department, which controls internal auditing, works with the corporate auditors to conduct audits of business operations in the Kyowa Hakko Kirin Group with regard to compli-

ance with laws, regulations and the Articles of Incorporation, and from the perspective of management efficiency. It reports the audit results and offers advice and proposals for improvements and greater efficiency.

Managing Risk through In-house Committees

Kyowa Hakko Kirin has in-house committees to develop responses to a variety of potential risk factors. These committees perform risk management and improve corporate governance, and periodically report on their activities to the Board of Directors. The principal roles of the in-house committees are described below.

CSR Committee: Deliberates on basic policies concerning Corporate Social Responsibility (hereafter “CSR”) and important matters concerning CSR, such as the group-wide CSR strategy and activities policy.

Group Risk Management Committee: Deliberates on group-wide risk management to identify potential management risks, assess risks and implement a risk response from a group-wide perspective. Deliberates on a basic policy for the protection and handling of confidential information. Deliberates on basic compliance policies and ensures compliance.

Risk Management Committee: Assesses risks at Kyowa Hakko Kirin Co., Ltd. and implements a risk response. Deliberates on a basic policy for the protection and handling of confidential information. Deliberates on basic compliance policies and ensures compliance.

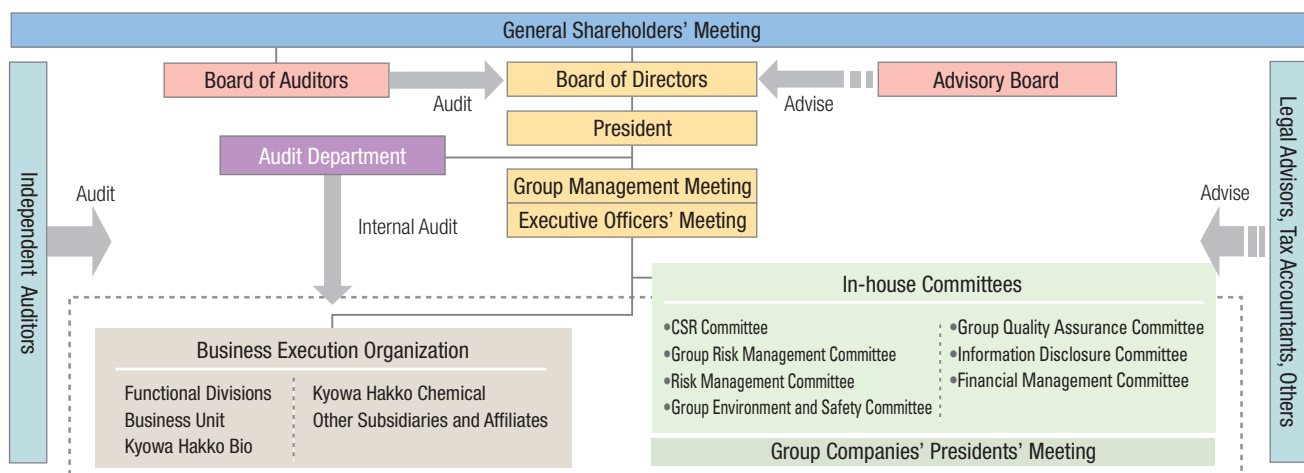
Group Environment and Safety Committee: An advisory group to the President that deliberates on basic policies relating to environmental protection and safety.

Group Quality Assurance Committee: An advisory group to the President that deliberates on basic policies relating to quality assurance.

Information Disclosure Committee: Comprehensively deliberates on basic information policies and important matters relating to information disclosure.

Financial Management Committee: Deliberates on efficient financial activities and risks attendant on financial activities.

Corporate Governance Organization



Basic Policy and Compliance Management

The Kyowa Hakko Kirin Group regards compliance as a top management priority. We believe the foundation of Corporate Social Responsibility (CSR) is not only to comply with regulations, but also to promote compliance to respond to social demands.

In accordance with the Kyowa Hakko Kirin Group Compliance Guidelines, we continue to promote compliance throughout the Group. We also continue to pursue thorough compliance by using the PDCA cycle as part of risk management.

Establishment of the Kyowa Hakko Kirin Group Compliance Guidelines

To ensure the sharing of the Kyowa Hakko Kirin Group's compliance mind-set among all Group employees, in March of this year we established the Kyowa Hakko Kirin Group Compliance Guidelines. The aim of the guidelines is to increase awareness of CSR matters, including the observance of rules and consideration of the environment and human rights.

We prepared a booklet and wallet card for employees to use as a basis for judgment when in doubt about their actions or the actions of others.

The Kyowa Hakko Kirin Group Compliance Guidelines (Excerpt)

Guided by the Kyowa Hakko Kirin Group Management Philosophy, "The Kyowa Hakko Kirin Group companies strive to contribute to human health and well-being worldwide by creating new value through the pursuit of advances in life sciences and technologies." We aspire to be a corporate group that behaves in accordance with high ethical principles and enjoys the trust of society.

Observance of Rules: We observe laws and other rules of society and act in good faith.

Relationship with Society: As a responsible member of society, we build good relationships with all our stakeholders.

Respect for Human Rights: We respect the human rights and individuality of all people.

Environmental Protection: We actively undertake preservation of the global environment for future generations.

Information Management: We properly manage information and engage in timely, appropriate information disclosure.

Education and Awareness Activities

We emphasize education and awareness activities to ensure that all employees, including corporate officers, recognize the importance of compliance and attend to their duties with high ethical values. We engage in the following cornerstone education and awareness activities annually. Also, we continually provide education about related regulations and rules in each division.

Corporate Ethics Lectures: We hold lectures for corporate officers and employees at the head office and nearby business sites, engaging attorneys, university professors and other outside experts as instructors according to the topic. We record the lectures to provide DVDs for viewing by employees at other business sites.

Corporate Ethics Lectures Held in 2009

Theme: *The Future of Companies that Blaze the Trail in Compliance—How to Make the Most of Team Power*

Instructor: Mr. Nobuo Gohara, Meijo University professor and Compliance Research Center director

Human Rights and Compliance Training: This is group training for Kyowa Hakko Kirin corporate officers and employees and the employees of certain affiliated companies conducted through the joint sponsorship of the Human Resources Department. Employees of the CSR Management Department or business sites serve as instructors, conducting training centered on group work.

E-learning Instruction: We provide instruction centered on PC-based case studies for Kyowa Hakko Kirin corporate officers and employees and the employees of certain subsidiaries. Once a year, we use the e-learning system to conduct an ethics check (a monitoring activity) by which participants review their own day-to-day behavior.



A training session

Establishment and Operation of Hotlines

Kyowa Hakko Kirin operates a hotline system for use in reporting or consultation in the event of the discovery of the commission or attempted commission of acts that violate laws or ethics. In October 2008 we newly established the Human Rights Hotline, which connects to the Human Resources Department, the fourth hotline in the system. The hotlines are available for use not only by corporate officers and employees, but also by occasional employees, part-time workers and temporary staff.

We also strive to create a work environment that encourages hotline use by distributing to all employees eligible to use the hotline system a pocket-sized booklet listing contact information and by posting posters on company premises to publicize the system.



Poster to familiarize employees with the hotline

The Desire to Bring Smiles to the Faces of as Many Patients as Possible with World-Class Bio-pharmaceuticals

The Takasaki Plant and the Bio Process Research and Development Laboratories are located in Takasaki City, in the northern part of the Kanto Plain. Nestled among three famous mountains of Gunma Prefecture, these eco-friendly, safe and sanitary business facilities engage in cutting-edge business operations admired and respected in the local community.

As the manufacturing site of a bio-pharmaceuticals manufacturer, we spend each day engrossed in the study of unique drug discovery techniques with the aim of contributing to human health and well-being worldwide. Operation as a manufacturing base began in 1990, when the plant commenced production of ESPO® (a renal anemia therapeutic agent). The following year the plant began producing GRAN® (a leukopenia therapeutic agent). 2007 marked the market introduction of the long-awaited NESP® (a long-acting erythropoiesis stimulating agent).

Since they are situated side by side, the Takasaki Plant and the Bio Process Research and Development Laboratories have adopted a collaborative framework that has opened the way to synergy in wide-ranging areas. The two organizations engage in close interchanges of technologies and personnel, and their employees work as one to more rapidly deliver superior pharmaceuticals to patients.



Kazuyoshi Adachi
Director
Takasaki Plant

Highly Focused Initiatives Applying Bio-production Technologies

With the aim of creating groundbreaking new drugs, the employees of the Bio Process Research and Development Laboratories work in unison on research that takes full advantage of the latest biotechnologies, with a core focus on antibody technologies. Our mission is to create practical pharmaceuticals from bio-pharmaceutical development candidate substances that are in the “dream” stage of development.

In bulk pharmaceuticals research, we apply genetic recombination techniques underpinned by leading-edge process science to develop and establish stable, reliable culturing and refining methods. In drug formulation research, we engage in formulation and packaging design to ensure that patients enjoy peace of mind and trouble-free use of our products.

In a parallel activity, we contribute to the commercialization of bio-pharmaceuticals that offer excellent quality, efficacy, safety and economy by developing scale-up technologies and establishing analysis methods. The research of the Bio Process Research and Development Laboratories comes to fruition in the health of people around the world.



Jun Yamaya
Director
Bio Process Research and Development
Laboratories



Process research and development



Cytoarchitecture

Ensuring the Safe Delivery of Pharmaceuticals

The Takasaki Plant is an advanced bio-pharmaceuticals production plant that complies with Good Manufacturing Practice (GMP), an international standard for pharmaceutical production and distribution, and maintains rigorous production control and quality control systems to ensure the production of dependable pharmaceuticals. To reliably deliver drugs that patients can use with peace of mind, the plant employees bring a sense of urgency and responsibility to their work at all times. We take delight and satisfaction in the fact that our products play a direct role in offering hope and joy to patients suffering from illnesses and proudly and diligently apply ourselves to our work each day. We will continue to take advantage of Kyowa Hakko Kirin's unique manufacturing technologies and quality control techniques to manufacture high-quality pharmaceuticals.



Quality control



The cell removal process

Systems to Ensure Pharmaceutical Quality

The quality control organization at the Takasaki Plant consists of the Quality Control Department, which evaluates the products manufactured at the plant using various tests and inspections, and the Quality Assurance Office, which comprehensively evaluates the results of the manufacturing process and quality control and approves shipments from the plant.

The Quality Control Department supervises the stable production of high-quality pharmaceuticals, making full use of advanced analysis techniques to confirm the quality of bio-pharmaceuticals. It also conducts wide-ranging tests and inspections of factors related to the manufacturing process, including raw materials and resources, the manufacturing water supply and the production environment. Conformance to GMP in work operations and confirmation of the appropriateness of those operations is important for ensuring the quality of each individual pharmaceutical product among the many thousands or tens of thousands manufactured at a time. The Quality Assurance Office maintains an independent perspective in confirming and judging whether work operations conform to protocol and whether noteworthy findings have an impact on quality.



Sharing Values, Aims, and Ideals—Team Kyowa Hakko Kirin

Since Kyowa Hakko Kirin's establishment in October 2008, we have engaged in discussions transcending the barriers of age and positioning the company to clarify the company's *raison d'être* and how we can contribute to society. We have summarized the passionate values, aims and ideals of the employees in *Sharing Values, Aims, and Ideals—Team Kyowa Hakko Kirin*, a document that sets forth our purpose.

In our role as an R&D-oriented pharmaceutical company, we aspire to contribute to people everywhere through the development of new drugs that bring smiles to the faces of people battling illness.

Here at Kyowa Hakko Kirin, an abiding respect for life, health, and wellness inspires everything we do. First and foremost, we work to protect and improve the lives of those who depend upon our products. As an up-and-coming pharmaceutical supplier and a driver of healthcare innovation, we are well-positioned to make a significant impact on public health. We intend to devote all of our resources and capabilities to this worthy goal.

Believe in Ourselves

Let us place our trust in our experience and our substantial shared pool of knowledge. Although we certainly are not the largest pharmaceutical firm, we possess a unique combination of core competencies and capabilities that are unparalleled in the market. Let us draw upon and sustain our history, our legacy, our technological prowess and our unsurpassed knowledge resources. The possibilities of what we can accomplish as a pharmaceutical company are infinite.

Strive to Be Fearlessly Innovative

The path to excellence is neither smooth nor linear. Let us have the courage to identify and overcome difficulties, the passion to reach beyond the conventional way of doing things, and the integrity to recognize and learn from missteps. Innovation is not simply the maturation of ideas; it is a leap of growth that can only be achieved through diligence, a daring dedication to progress, and a willingness to transcend the status quo.

Support Wellness and Quality of Life

Let us endeavor to go beyond just making medicine. Health is more than just the absence of illness, and our work should be carried out with a solemn awareness that wellness and quality of life are equally worthy goals. And, let us engender happiness. Think always of the families whose ailing loved ones depend on us, and support the healthcare practitioners who strive tirelessly to save lives. Innovative research and business insight are not enough to help us fulfill our mission—we must cultivate kindness, empathy, and sensitivity to the problems facing humanity, as well.

Find Strength in Numbers

Let us aim to become the ultimate team. No matter how talented an individual may be, alone he or she is hardly perfect. Let us take our energy, enthusiasm and pioneering spirit to join as one. Through our combined strength, we can yield unimaginable solutions. This is what we want to show the world.

Accelerate Our Efforts

Let us carry out our work while raising our awareness of the scale of patients' suffering from the diseases that we combat. Each day, lives are lost and families are torn apart by illnesses that our research and products can help to eradicate. The challenge may be overwhelming, but our efforts must be ceaseless—there can be no rest along the way.

Pursue Our Objectives with Honesty and Integrity

At all times and in all things, let us comport ourselves and make decisions in a manner that is consistent with our mission. As a manufacturer of medicine, our company's very survival depends on our customers' implicit trust. Countless lives hang in the balance; let us make a vow to act always with the integrity this mission demands.

Celebrate and Take Pride in Our Shared Mission

The Kyowa Hakko Kirin team comprises a talented group of professionals who hail from all over the globe. Through a remarkable confluence of events, we have all come together to share in this work, forming a unique synergy of hearts and minds in the process. Even though we face difficult challenges, let us also appreciate the opportunity to help protect and improve people's lives.

Let us harness our passion to serve humanity and shape the future. Let us walk the path of hope for every precious life.

We are Kyowa Hakko Kirin. For each life, we are here.

Responsible Care (RC) Community Dialog

Kyowa Hakko Bio actively participates in community dialog activities sponsored by the Japan Responsible Care Council. Each year the Yamaguchi Production Center Ube, jointly with five Ube-Onoda district member companies, holds a Responsible Care Community Dialog meeting in the Ube-Onoda district. The most recent meeting drew about 50 participants, including representatives from residents' associations, environmental NGOs, public administrations and the participating companies. A tour of the Nissan Chemical Industries Onoda Plant and explanations by member companies of their environmental activities were followed by questions from area residents concerning the response to odors, chemical substances and global warming and public relations activities, as well as individual company presentations about their local environmental and security activities.



The Ube-Onoda District Responsible Care (RC) Community Dialog meeting (February 2009)

Bio-adventure Activities (Tokyo Research Park)

2009 marks the tenth year for bio-adventure activities, in which Tokyo Research Park employees conduct science experiment classes at local elementary and junior high schools.

Over the years, these activities have taken firm root in the community, and some children have even participated twice. One participant wrote the following in a questionnaire survey conducted after the classes: "DNA is very cool. My dream is to become a researcher, and I think I was able to take the first step with this class." The employees intend to continue their efforts to increase the number of children who love science.



The Bio-adventure Mobile Laboratory

WWF Japan

Established in Switzerland in 1961, the World Wide Fund for Nature (WWF) is an environmental conservation organization that engages in activities in approximately 100 countries to construct a future in which humans and nature can coexist in harmony. The WWF currently focuses on preservation of forest and marine biological diversity, promotion of sustainable use of natural resources such as timber and marine products, and global warming prevention. All WWF activities are supported by donations from individuals and corporations, and Kyowa Hakko Kirin provides support as a corporate member.

Distribution of Braille Calendars

Each year since 1994, we have produced Braille calendars for people with visual impairments and distributed them free of charge to schools for the blind nationwide. We delivered about 4,000 copies of the 2009 edition of the calendar, which features elephants, koalas and other large and small animals, to 71 schools across Japan.

Activities to Support Areas Hit by Torrential Rains

Hofu City in Yamaguchi Prefecture, home to Kyowa Hakko Bio's main production plant, incurred severe damage in torrential rains that battered Chugoku and Northern Kyushu in July 2009. The Kyowa Hakko Kirin Group is offering cooperation and support, along with prayers for rapid recovery, for the residents of this area, who have been supportive of the company going back to the time of the former Kyowa Hakko Kogyo. Employees of the Kyowa Hakko Bio Yamaguchi Production Center Hofu participated in volunteer support activities in affected areas.



The removal of mud from roads and homes

Relations with Shareholders and Investors

The Kyowa Hakko Kirin Group regards investor relations as an important management priority and endeavors to provide shareholders and investors with business information in a manner that is timely, appropriate and fair. We have established a disclosure policy to ensure the information benefits our customers, employees, society, shareholders, investors and other stakeholders. Our aim is to communicate a wide variety of information about the Kyowa Hakko Kirin Group as one element of sincere and highly transparent management.

Disclosure Policy

Based on the principles of transparency, fairness and consistency, Kyowa Hakko Kirin strives to provide timely, accurate disclosure of information to shareholders and other investors in accordance with the Financial Instruments and Exchange Law and the timely disclosure rules of the Tokyo Stock Exchange (TSE). In addition, Kyowa Hakko Kirin is committed to the timely and active disclosure of other information that, in the judgment of the Company, will be effective in helping shareholders and other investors to understand Kyowa Hakko Kirin. (Amended October 2008)

Analyst Meetings

Kyowa Hakko Kirin holds meetings at which the CEO explains to institutional investors, securities analysts and mass media representatives the financial results for the interim period and fiscal year. Interested parties unable to attend the meetings may obtain accounts of the meetings from the Kyowa Hakko Kirin website for shareholders and investors. The CEO and other corporate executives strive to actively disclose business information at all times and the CEO visits overseas investors each year.



Analyst meeting on financial results, held on April 28, 2008

Kyowa Hakko Kirin Website for Shareholders and Investors

<http://ir.kyowa-kirin.co.jp/english>

Reports for Shareholders and Investors—

“To Our Shareholders” and the Annual Report—

Kyowa Hakko Kirin sends the Japanese-language report “To Our Shareholders” (formerly the business report) to shareholders twice a year and posts the report on its website for viewing by investors other than shareholders. We distribute a printed English-language annual report to overseas investors and post the English version and Japanese version of the report on the corporate website.

Inclusion in Socially Responsible Investment Indices

Kyowa Hakko Kirin has been included in the FTSE4Good Index Series of socially responsible investment indices.



Certificate of inclusion in the FTSE4Good Index Series

Relations with Business Partners

Green Procurement Activities

Because it is important for the continuation and enhancement of environmental activities to realize a low-carbon corporate group throughout the supply chain, the Kyowa Hakko Kirin Group engages in collaborative environmental activities with business partners in the procurement of raw materials and supplies, office supplies and facilities. In October 2008 we established the Green Procurement Policy, and in fiscal 2009 we conveyed our environmental activity requirements to business partners and conducted a green procurement questionnaire survey.

Human Rights Awareness Activities

Public attention to compliance and CSR has increased in recent years, and it is no exaggeration to say that business activities that place importance on people have become the standard worldwide. To achieve the Group Management Philosophy, Action Guidelines and Business Vision, Kyowa Hakko Kirin has made an earnest commitment to human rights and promotes the creation of cheerful, worker-friendly workplaces that respect diverse values. We have established a human rights hotline, provide consultation and publicized the workplace harassment help desk. During Human Rights Week in December 2008, we distributed a message from the president to all employees. We have conducted human rights and compliance training for all employees since May 2009. In the coming years, we will proceed with continuing activities to raise human rights awareness and foster a sound organizational culture.

Childcare Support Measures

To ensure that Kyowa Hakko Kirin can take maximum advantage of the skills of hard-working employees, regardless of individual lifestyles or gender, we are promoting the following concepts jointly with the labor union.

- We recognize that the creation of a society and companies that provide equal opportunities for men and women is an important matter to Kyowa Hakko Kirin and will support that effort.
- We support employees who require temporary leave or workload reduction to provide childcare, but wish to continue employment and grow with the company.
- We will seek to develop a group-wide culture of supporting employees involved in childcare by instilling awareness that the reconciliation of work and childcare is beneficial to Kyowa Hakko Kirin, while simultaneously encouraging employees who receive support to actively seek harmony with their fellow employees.

Employment of Workers with Disabilities

Kyowa Hakko's rate of employment of people with disabilities was 1.98% in June 2008, exceeding the 1.8% standard in the Law for Employment Promotion, etc. of Persons with Disabilities. Kyowa Hakko Kirin employed 88 disabled people as of March 2009 (one person with severe disabilities is counted as two persons employed) and plans to receive a disabled persons employment adjustment allowance. Kyowa Hakko Kirin will continue to implement workplace environment improvements consistent with the aptitudes and lifestyles of individual employees.

Human Resource Development System

The Kyowa Hakko Kirin Group has established a new human resource development system grounded in the principle that individuals diligently study for their own career development and the company supports their effort. The chart below shows the training system, which consists of rank-specific training to develop skills in accordance with experience or career stage, selective training to contribute to the achievement of strategic objectives, organization-based education conducted by individual organizations and companies, a self-development support system for employees who engage in self-study and training conducted by the Kirin Group. We will seek to enhance the content of these training programs in keeping with a policy of further strengthening human resource development efforts to promote the growth and development of the entire Group.



New employee training

Training System

	Rank-specific and age-specific training	Selective training	Theme-specific training	Other	Group companies and Kyowa Hakko Kirin organizations	Kirin Group training	
Officers	Officer and operating officer study sessions						
Senior managers	Skills training Mental training Manager training	Executive seminars	Planned yearly according to circumstances	Outside assignment system (overseas assignment, career support programs, etc.) Human rights training, compliance training Self-development support system	Independent planning and implementation of necessary personnel development measures	Executive school	
Managers	New manager training Career development training (age 40)	Senior management training Senior globalist training				Kirin management school	
Senior line employees	Business structure Career development training (age 30)	Basic strategy training Leadership Facilitation				Junior globalist training	Business college
Line employees	Logical thinking Independent thinking New employee training						

Occupational Safety and Health

Occupational Safety and Health Management Systems

To prevent industrial accidents, in accordance with the annual environment and safety policy, the Kyowa Hakko Kirin Group engages in risk assessment activities at each business site. These assessments are done as part of routine production and construction work. The progress of environment and safety activities is checked in the annual environment and safety audit, and the audit results are reported to management at a meeting of the Environment and Safety Committee and reflected in the action plan for the following year.

New Manager Training

We train newly appointed managers at the Group's plants and laboratories in important environment and safety management matters such as the Kyowa Hakko Kirin Group's environment and safety policies, safety management, safety education and risk assessment implementation. We provide safety-related training based on a program for newly appointed safety officers that is mandated under the Occupational Health and Safety Law.

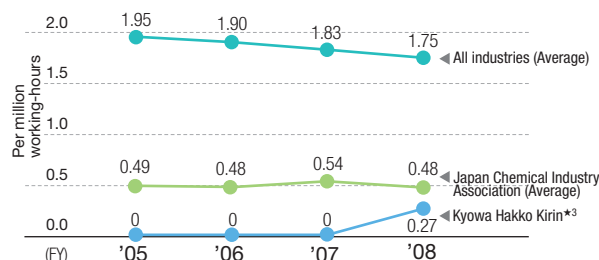
Environmental and Safety Personnel Conference

Each year, the Kyowa Hakko Kirin Group conducts an Environment and Safety Conference and an Environmental and Safety Personnel Conference attended by the environmental and safety managers and personnel of Group production and research sites. In June 2009, we conducted an extraordinary Group Environmental and Safety Personnel Conference. Participants shared information on industrial accident case studies, such as a study of accidents resulting in lost work time, and discussed topics including measures to prevent the recurrence of accidents in irregular operations, technology succession and safety education.

Accident Statistics

In fiscal 2008, the number of accidents resulting in lost work time at Kyowa Hakko Kirin, Kyowa Hakko Bio, Kyowa Hakko Chemical and Kyowa Medex was one, resulting in a low industrial injury frequency rate*1 of 0.27 and a severity rate*2 of 0.0046. There was also one accident resulting in lost work time at a food products subsidiary.

Occupational Injury Frequency Rate



*1 Defined as the number of injuries resulting in lost days per million working hours
 *2 Defined as the total number of working days lost per thousand working hours
 *3 Kyowa Hakko Kirin, Kyowa Hakko Bio, Kyowa Hakko Chemical and Kyowa Medex

Awards

In fiscal 2008 and fiscal 2009 we received the following awards for environment and safety achievements and an accident-free record.

Fiscal 2009

- Incentive Award of the Director-General of the Tokyo Labour Bureau
Kyowa Hakko Kirin Tokyo Research Park

Fiscal 2008

- Certified as an "Eco factory" by the Governor of Yamaguchi Prefecture
Kyowa Hakko Kirin Yamaguchi Production Center Hofu / Ube
- Incentive Award of the Japan Bioindustry Association Forum for Exchange between Academia and Industry
Kyowa Hakko Kirin Tokyo Research Park
- Certificate awarded by the Japan Industrial Safety and Health Association (JISHA) in recognition of a new accident-free record for the organic chemical industry
Kyowa Hakko Chemical Yokkaichi Plant (23.95 million accident-free hours)

Noboru Kojima

Manager
Kyowa Hakko Kirin Tokyo Research Park

5回 東京産業安全衛生大会 2009



At Tokyo Research Park (in Machida), labor and management work together in a spirit of co-operation to vigorously implement occupational safety and health activities. These efforts have earned public recognition in the form of the Incentive Award of the Director-General of the Tokyo Labour Bureau, awarded at the 2009 Tokyo Industrial Health and Safety Convention for maintaining excellent safety and health standards. The Tokyo Research Park team is committed to redoubling efforts to ensure occupational safety and health.

Traffic Safety

Kyowa Hakko Kirin had 1,478 commercial vehicles in use as of March 31, 2009, and sales offices engage in traffic safety activities in accordance with a group-wide traffic safety policy. Since fiscal 2008, we have reinforced safety activities, notably skills instruction at driving schools before and after hiring, to improve the driving skills of new employees.

With respect to the environment, in fiscal 2008 we achieved our target of using 100% low-pollution company-owned commercial vehicles (certified low-emission vehicles). To further enhance our environmental response, in 2009 we began conversion to hybrid vehicles. We plan to introduce 1,000 gasoline-electric hybrids by 2014.

(FY)	2005	2006	2007	2008
Company-owned commercial vehicles (units)	666	699	698	1,079
Low-pollution vehicles (units)	606	663	695	1,079
Adoption rate (%)	91.0	94.8	99.6	100

Aiming for Zero Accident and Disaster Status

The Kyowa Hakko Kirin Group has established a Safety Measures Headquarters headed by an executive manager and decided a framework for supporting rescue and recovery activities in the event a business site incurs major damage from an explosion, fire, earthquake or other natural disaster. Each business site engages in activities centered on risk assessment, puts in place a disaster preparedness system to minimize damage in the event an accident occurs and periodically conducts disaster preparedness drills. In fiscal 2008 fire broke out at the Kyowa Hakko Chemical Chiba Plant owing to a pipe leak and at the Yokkaichi Plant during periodic repairs. In both instances, firefighting measures were rapidly taken, injury was avoided and damage was held to a minimum. We identified the causes of the fires, took measures to prevent a reoccurrence and cross-implemented the prevention measures at other business sites.

Disaster Preparedness Drill (Kyowa Hakko Bio Yamaguchi Production Center Hofu)

On March 18, 2009 the Yamaguchi Production Center Hofu conducted a comprehensive disaster preparedness drill that simulated the response to a liquefied ammonia leak. The Yamaguchi Production Center Hofu stores and handles high-pressure gas facilities, alcohol and other hazardous materials, and it has many production, storage and handling sites on its grounds. Safety assurance is extremely important since a gas leak from a high-pressure gas facility or a fire, explosion, or leakage accident at a hazardous substance facility would have a significant impact on the surrounding community. The center conducts twice-yearly comprehensive disaster preparedness drills with the cooperation of the organizations concerned. Management intends to continue to raise employee disaster prevention awareness through drills.



Disaster preparedness drill

Measures to Prepare for a Major Earthquake

The Kyowa Hakko Kirin Group has long been committed to its social responsibilities as a manufacturer, particularly its responsibilities as a supplier of pharmaceuticals. Since the 1970s, when the possibility of an earthquake in the Tokai region was first suggested, the Group has responded by developing regulations, dispersing production and distribution operations and earthquake-proofing its buildings. As part of risk

management in preparation for an earthquake in the Tonankai-Nankai area or the Tokyo metropolitan area, we have installed satellite telephone systems at all business sites, including sales offices, and engage in monthly drills. Furthermore, in 2007 we introduced at the head office a system for confirming the safety of employees and their families in case of an earthquake emergency. In fiscal 2008 we expanded the system and commenced operation at the plants, laboratories and sales offices.

Earthquake Preparedness Drill (Fuji Plant)

The Fuji Plant conducted an annual disaster preparedness drill in November 2008 in preparation for an earthquake in the Tokai region. In fiscal 2008 the plant completed anti-seismic reinforcement construction. Now, all buildings can fully withstand the earthquake anticipated for the Tokai region. These preparations notwithstanding, as a precautionary measure the plant conducted a drill to confirm the procedure for temporarily setting up the disaster preparedness team headquarters outdoors and then relocating it inside a safe building following building emergency risk assessment. The drill also involved practice in the use of radio communication to rapidly ascertain the overall damage and issue instructions. The plant plans to continue to conduct practical drills appropriate to specific emergency situations.



Earthquake preparedness drill

Distribution Safety

The Kyowa Hakko Kirin Group maintains a 24-hour emergency response system to rapidly deal with emergencies during the transportation of chemicals and alcohol. We have introduced the Yellow Card and Container Yellow Card systems of the Japan Chemical Industry Association and strive to thoroughly familiarize distribution and transportation workers with disaster response methods and ensure safety. There were no distribution-related accidents during fiscal 2008.



Shipping alcohol

Global Warming Prevention Initiatives

As reported in Sustainability Report 2008, the former Kyowa Hakko Group set a fiscal 2010 target of an 8% reduction in CO₂ emissions from the fiscal 1990 level and engaged in CO₂ reduction activities at its business sites. As a result, in fiscal 2007 the Group achieved a 14.6% reduction from the fiscal 1990 level and surpassed the fiscal 2010 target. In fiscal 2008, the Kyowa Hakko Kirin Group actively continued wide-ranging environmental activities.

Activities Target

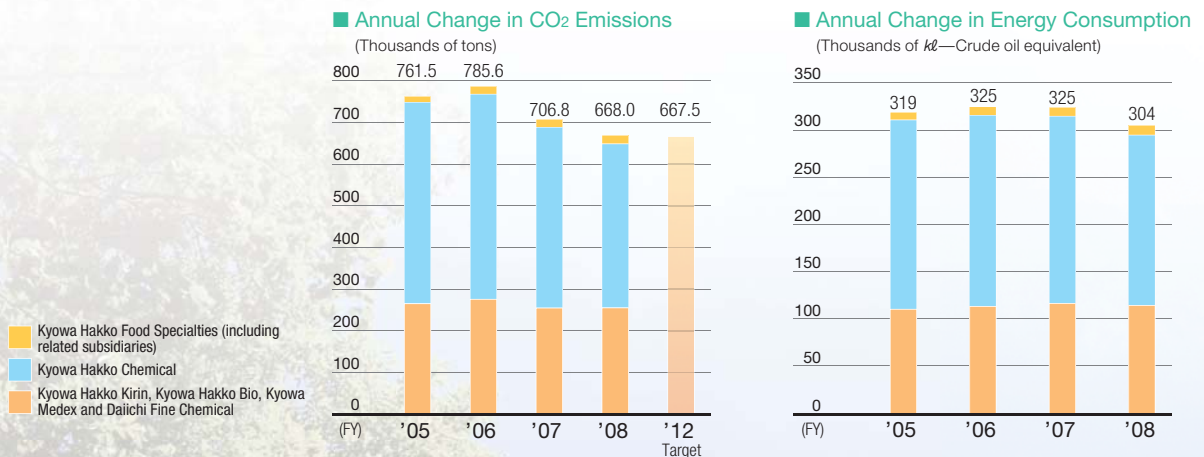
A 3% group-wide reduction in CO₂ emissions in fiscal 2012 (from the fiscal 2007 level)

New CO₂ Emissions Reduction Initiatives

Following the establishment of the Kyowa Hakko Kirin Group in October 2008, the Group set a new target for fiscal 2012 of a 3% reduction in CO₂ emissions from the fiscal 2007 level. The Group emitted 668,000 tons CO₂ in fiscal 2008, a reduction of 5.5% year on year. However, low plant operation rates in the chemicals industry as a result of the global economic recession had a significant impact on this performance, and unit energy consumption worsened from 183 liters of crude oil per ton of products in fiscal 2007 to 195 liters per ton in fiscal 2008. However, the Group is steadily implementing energy conservation activities centered on the Eco-project, including the equalization of plant steam consumption (Yamaguchi Pro-

duction Center Hofu), a plan to convert boiler fuel to gas (Kyowa Medex), the installation of a high-efficiency package boiler (Yamaguchi Production Center Ube) and the introduction of a utilities monitoring system (Sakai Plant). In December 2008 the Group commenced participation in Japan's trial emissions trading scheme as a chemical industry member and is determined to achieve the 2012 target without fail.

In response to Kirin Group's goal of becoming a low-carbon corporate group, we are considering policies and measures in preparation for the inclusion of greenhouse gas emissions control targets and methods to extend throughout the supply chain in the next medium-term plan (for fiscal 2010 to 2012).



The 2012 target covers Kyowa Hakko Kirin, Kyowa Hakko Bio, Kyowa Hakko Chemical, Kyowa Medex and their subsidiaries.

The Use of Renewable Energy

In October 2008, the Fuji Plant converted the light source for its advertising signboard from neon tubes to high-brightness light emitting diodes (LEDs). Since the power consumption of the LEDs is approximately one-third that of the neon tubes,

the advertising signboard was reborn as an eco-friendly, energy-efficient structure. Thanks to a photovoltaic power generation system (using solar panels) installed in 2008, nearly all of the electric power used for the signboard is clean solar energy.



Photovoltaic power generation system



The Fuji Plant's advertising signboard

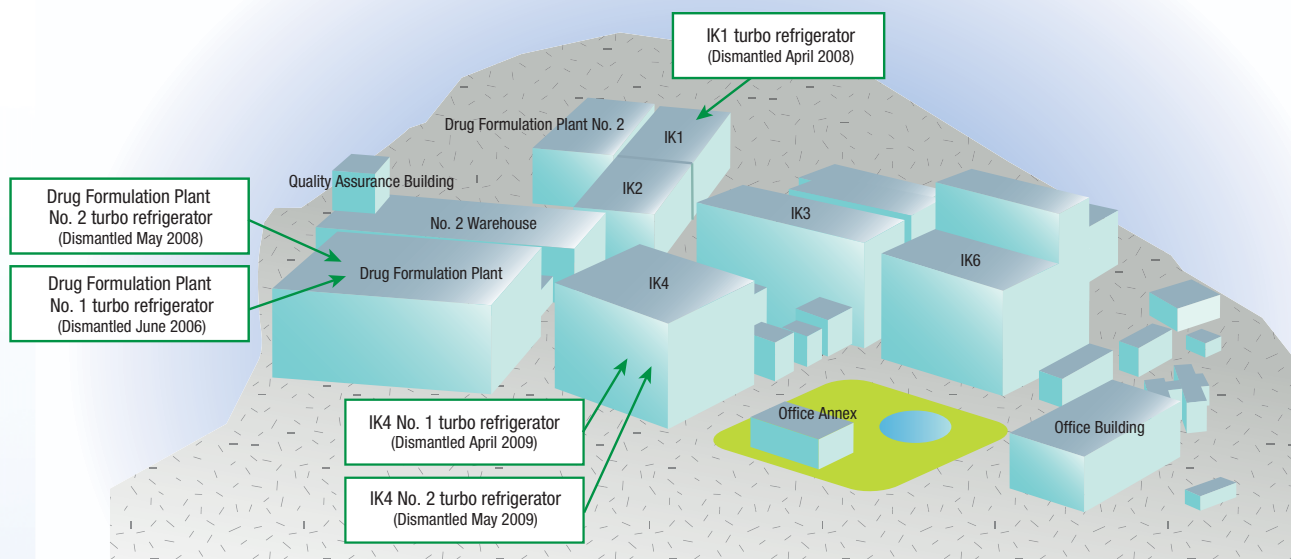
Energy Conservation and Ozone Depletion Prevention through Refrigerator Replacement

Owing to the special cooling and dehumidification requirements of drug formulation, the Fuji Plant previously used five refrigerators, with chlorofluorocarbon (R-11) as a refrigerant for air conditioning. The plant stored 1,420 kilograms of this chlorofluorocarbon, which has a high ozone depletion factor. Since June 2006, the plant has systematically proceeded with the dismantling and replacement of these refrigerators and chlorofluorocarbon destruction. It completed the removal of all chlorofluorocarbon (R-11) in June 2009. The plant selected chlorofluorocarbon substitutes* that do not destroy the ozone

layer for use in the new refrigerators and achieved an energy-saving effect of approximately 35 kiloliters of crude oil per year through adoption of highly energy-efficient facilities and operating methods.

Protection of the global environment is essential for the survival of all living things. The Fuji Plant will continue to contribute to the creation of a safe, livable global environment by striving to eliminate environmental impact factors.

★ 1R-134a and R-407c



Environment-friendly Products and Technologies

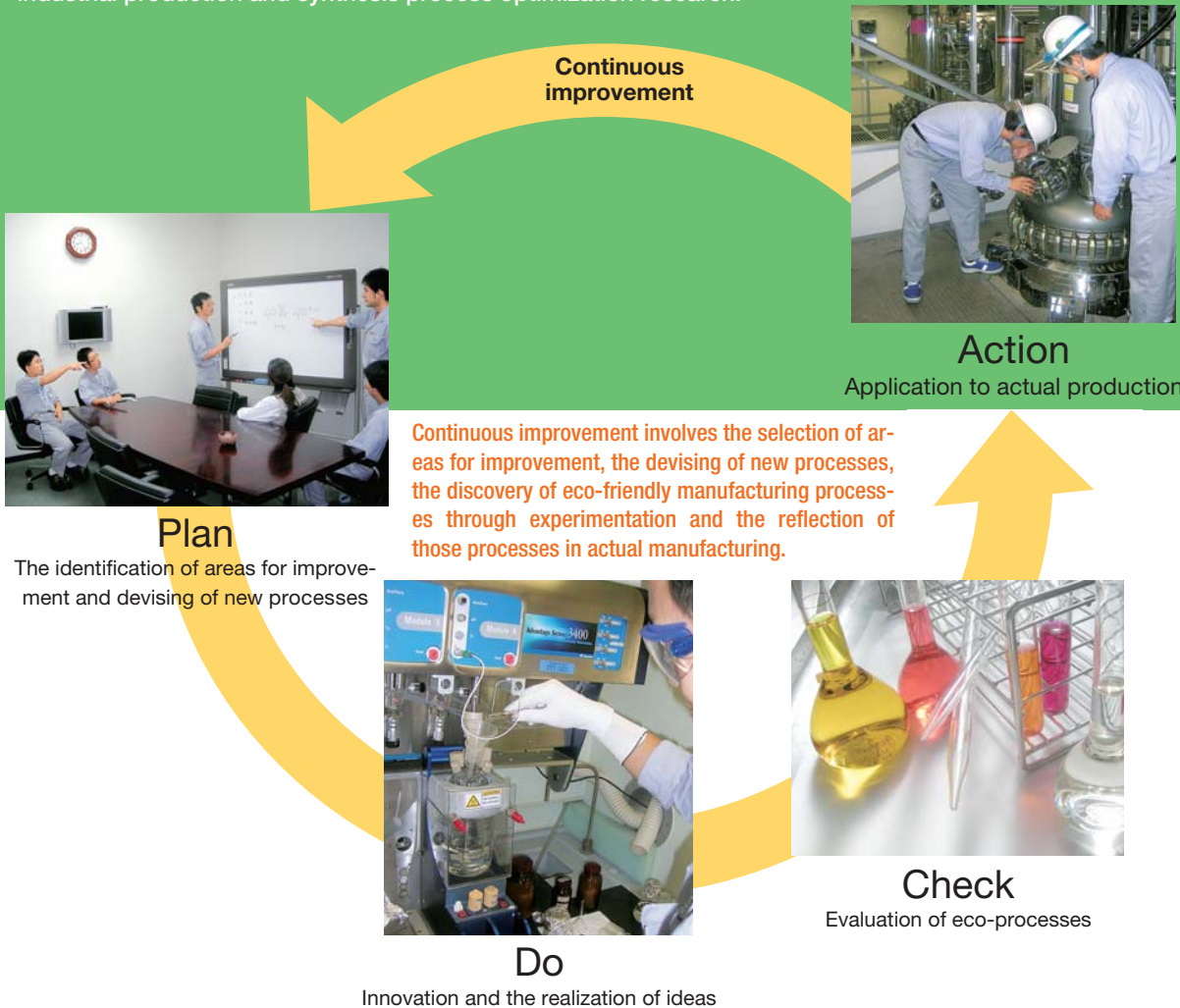
Chemical Process Research and Development Laboratories
Toward a Future Global Environment Supported by New Technologies

Ecology-minded synthesis process development

The active ingredients of pharmaceutical products (bulk pharmaceuticals) include antibody drugs and other bio-derived substances as well as organic compounds synthesized by combining a variety of chemical reactions. The Chemical Process Research and Development Laboratories develops effective methods for synthesizing new drug candidate compounds discovered in exploratory research and engages in wide-ranging research necessary for the manufacture of bulk pharmaceuticals, such as scale-up research for industrial production and synthesis process optimization research.

Environmental Performance

Environment-friendly Products and Technologies



Ordinarily, bulk pharmaceuticals are manufactured through complex, multi-stage synthesis processes. Each process requires large quantities of organic solvents in addition to the compounds that are the raw materials, and the chemical reactions generate many additional byproducts (waste). Also, large amounts of energy are required for heating, cooling and agitation operations during reactions. In the development of synthesis processes for pharmaceutical raw materials, the Chemical Process Research and Development Laboratories strive to ensure the quality of bulk pharmaceuticals and pro-

cess safety, and also devise measures for quantitatively assessing the environmental impact of processes and ensure the eco-friendliness of future bulk pharmaceutical manufacturing. An example of this effort is process reduction by reviewing synthesis methods, reducing use of organic solvents and using safe reactants.

We aspire to ensure the effective use of resources in future bulk pharmaceuticals manufacturing and reductions in energy use and CO₂ emissions through the development of synthesis processes having lower environmental impacts.

Kyowa Hakko Chemical**Refrigerator Lubricant Raw Materials for Non-ozone Layer Depleting CFC Substitutes (HFCs)****ISONONANOIC ACID (KYOWANOIC-N) and
2-ETHYL HEXANOIC ACID**

Specified chlorofluorocarbons (HCFCs, R-22) have been used as refrigerants in air conditioners for home and commercial use and in commercial refrigerators and freezers. However, international activities to prevent ozone layer depletion have been undertaken since the second half of the 1980s, and complete abolition of specified chlorofluorocarbons (HCFCs) in 2010 is planned in Japan and the U.S. For compressors in air conditioners, large freezers and other equipment that use non-ozone layer depleting CFC substitutes

(HFC R-407C, R-410A, etc.), lubricating oil (refrigerant oil) that is highly soluble with CFC substitutes is necessary. With the aim of contributing to preservation of the global environment, to meet this demand, during fiscal 2008, Kyowa Hakko Chemical increased production capacity for synthetic fatty acid refrigerant oil raw materials (Isononanoic Acid and 2-Ethyl Hexanoic Acid) to 60,000 tons per year, among the highest in the world.

 <http://www.kyowachemical.co.jp/eng>

Kyowa Hakko Bio**The Promotion of an Environment-friendly Livestock Industry****Feed Additive Amino Acids, Enzymes and Microbial Materials**

Nitrogen, phosphoric acid and other environmentally hazardous substances directly or indirectly discharged into rivers by the livestock industry are said to promote the eutrophication of lakes and enclosed bays and contribute to environmental damage such as red tide and water bloom.

Kyowa Hakko Bio decreases the nitrogen and phosphorous content of feed through the use of lysine, threonine and other feed additive amino acids and phytase, a phytic acid decomposing enzyme. We have developed environment-friendly feeds that can reduce the excretion of nitrogen and phosphorous by up to 40% in com-

parison with previous feeds and are promoting the use of these feeds by formula feed manufacturers and livestock-producing farmers. Furthermore, we have recently pursued the development of technologies to enable the efficient utilization of animal feed produced from recycled food waste, an initiative promoted by the Ministry of Agriculture, Forestry and Fisheries. We are also jointly developing CompoDash KYOWA, a microbial material that promotes composting, to assist in the processing of livestock excrement.

 <http://www.kyowahakko-bio.co.jp/english>

Environment and Safety Management

Environment and Safety Management

The Kyowa Hakko Kirin Group has established an ISO 14001 environmental management system and an occupational safety and health management system centered on risk assessment. We apply these systems in a thorough PDCA cycle of environment, safety and health activities. In addition to observing laws and regulations related to the environment and safety, we engage in activities based on even more rigorous voluntary targets.

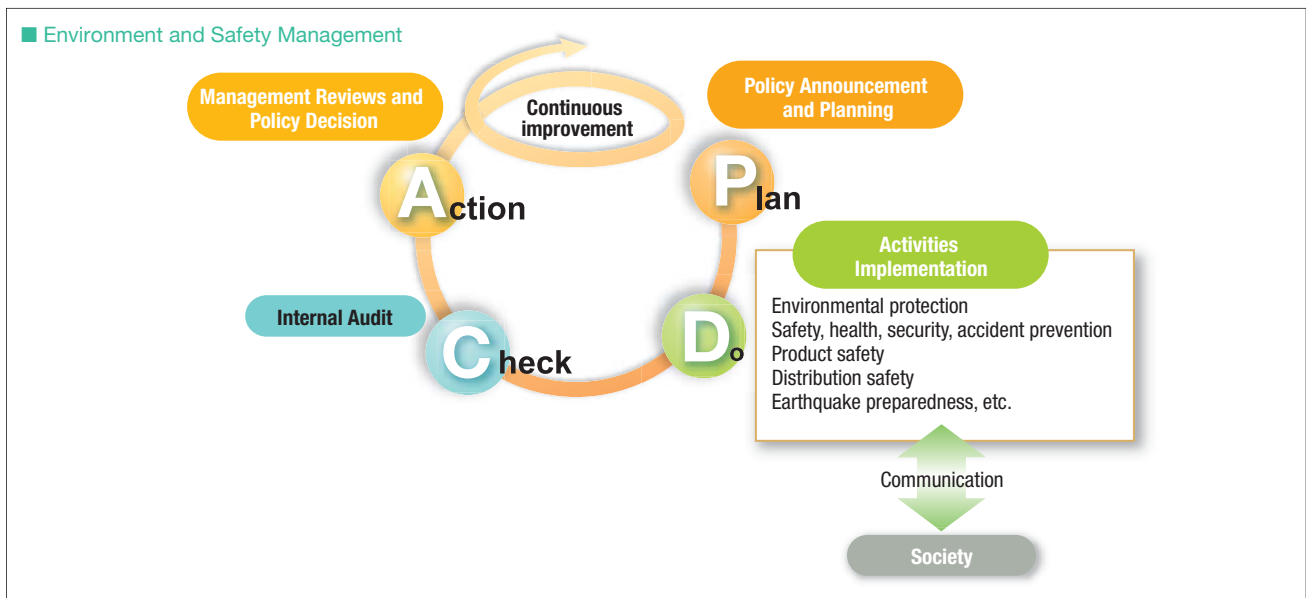
In May 2009, eight business sites (the Kyowa Hakko Kirin head office, Takasaki Plant, Fuji Plant, Sakai Plant, Ube Plant, Yokkaichi Plant, Tokyo Research Park and the Kyowa Medex Fuji Plant) obtained ISO 14001 combined certification. The Group will continue to engage in environmental activities that

utilize the ISO 14001 management system to achieve the goal of being a low-carbon corporate group throughout the supply chain.

Basic Policy on the Environment, Safety and Product Safety

Based on Kyowa Hakko Kirin's corporate philosophy, we will exert ourselves to realize an affluent society by conducting business activities with scientific consideration for health, safety, the environment and product safety throughout the entire life cycle of each of our products. That extends from research and development through production, marketing, use and disposal. At the same time, we are making efforts to ensure the quality and safety of our products, taking the safety of consumers as a matter of the greatest importance.

(Established October 1, 2008)



Environmental and Safety Audits

In fiscal 2008, environmental and safety audits were conducted at 34 business sites of 13 companies selected from among the domestic and overseas business sites of Kyowa Hakko Kirin and its consolidated and non-consolidated subsidiaries. The audits revealed no major legal infringements or environmental accidents. The principal areas for improvement identified in the audits are shown below.

Areas for Improvement Identified in Safety Audits

- Enhancement of risk assessment at the facilities planning stage (Sakai, Tokyo Research Park, Yamaguchi Production Center Ube)

- Improvement of work environments (Fuji, Kyowa Medex)

- Communication of information on chemical substances, etc. to construction contractors (Daiichi Fine Chemical)

Areas for Improvement Identified in Environmental Audits

- Rationalization of utilities use (Takasaki, Kyowa Medex)

- Reduction in waste sludge generation (Yamaguchi Production Center Ube)

- Pollution control manager retraining (Chiba)

Complaints

In fiscal 2008, six complaints were received about Kyowa Hakko Kirin Group plants and research sites in Japan: three complaints about noise or vibration and three about odors (13 complaints in fiscal 2007). We regret the inconvenience caused to residents nearby. We have taken prompt action to prevent the recurrence of these problems. We will pay heed to prevent these complaints and aim to reduce the number of complaints to zero.

Environmental, Safety and Product Safety Assessments

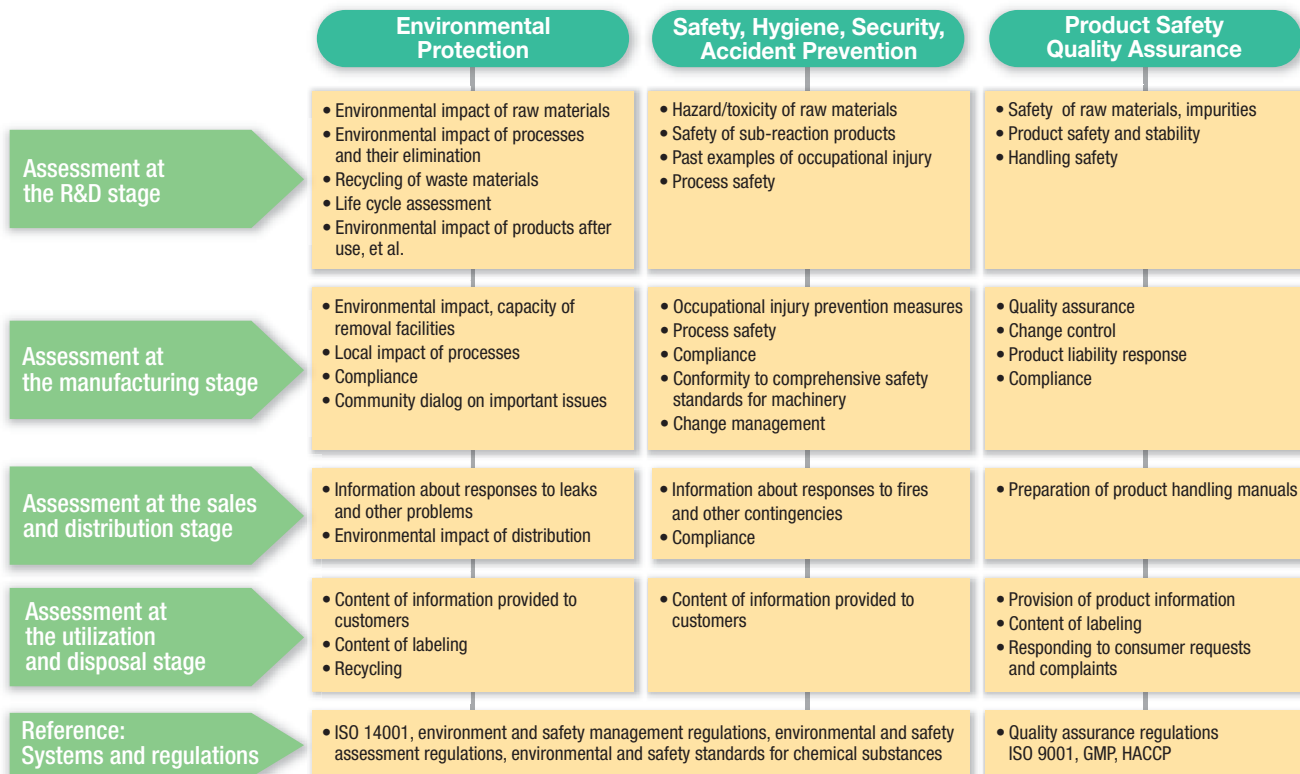
Environmental, Safety and Product Safety Assessments

Kyowa Hakko Kirin Group has established the Basic Policy on the Environment, Safety, and Product Safety, engages in wide-ranging Responsible Care activities related to the envi-

ronment and safety and rigorously operates a system of assessments at each product lifecycle stage, from research and development to use and disposal.



Environmental, Safety and Product Safety Assessments



Safety Assessment of Chemical Products

The companies of the Kyowa Hakko Kirin Group continuously conduct chemical product safety assessments. In the Program for Gathering and Disseminating Safety Information on Existing Chemical Substances (Japan Challenge Program), a collaborative initiative between the public and private sectors, the Acetaldehyde Consortium in which Kyowa Hakko Chemical participates has prepared a safety information report. In addition, Group companies are continuing with activities for three other substances. Group companies completed the pre-registration necessary for the Registration, Evaluation, Authorisation and restriction of Chemicals (REACH) system and are making preparations for registration. We have also moved forward with preparations to comply with Japanese law concerning conversion to product hazard labels and MSDS that comply with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), engaged in voluntary activities with respect to products subject to notification and nearly completed publication of GHS-compliant MSDS.

Ethical Considerations in Research and Development

Kyowa Hakko Kirin undertakes research and development of drugs in consideration of the following matters.

- Bioethics**
 Kyowa Hakko Kirin sets internal regulations with the aim of assuring ethical and scientific validity in human genome analysis and research using human tissue and of preventing the loss of dignity and human rights of tissue donors.
- Consideration of Human Rights in Clinical Trials**
 When commencing a clinical trial involving human subjects, Kyowa Hakko Kirin convenes an internal clinical trial committee consisting of external physicians and employees not involved in pharmaceutical development. The committee discusses ethicality, including the protection of the human rights and personal information of the trial subjects (patients) and volunteers, as well as safety and clinical trial quality.
- Consideration of Laboratory Animals**
 To ensure the appropriate conduct of animal testing, Kyowa Hakko Kirin sets a basic policy as well as specific policies governing experiments for each research site, based on laws and guidelines set forth by the government and academic groups.

Action Plans and Performance in Fiscal 2008 (Environment and Safety)

Guideline for Action	Initiative	Fiscal 2008 Target
Guideline for Action 1 Expand the application of environmental and safety management systems	Establishment of ISO 14001 environmental management system	Establishment of ISO 14001 system at Kyowa Hakko Kirin, Kyowa Hakko Bio, Kyowa Hakko Chemical, Kyowa Medex and consolidated subsidiaries
	Integration of ISO 14001 and occupational safety and health management system	Kyowa Hakko Kirin, Kyowa Hakko Bio, Kyowa Hakko Chemical, Kyowa Medex: Operation of integrated management system
	Environmental and safety audits	Audits of consolidated subsidiaries (100%)
Guideline for Action 2 Ensure compliance and continuously improve performance	Ensuring compliance	Zero legal infringements, zero complaints
	[Production and R&D]	
	Eco-Project	
	<ul style="list-style-type: none"> Global warming prevention (CO₂ emissions) 	Reduction of CO ₂ emissions to 3% below fiscal 2007 level or lower by fiscal 2012
		Periodic updating of freezers that use the chlorofluorocarbon R11
	<ul style="list-style-type: none"> Unit energy consumption 	Reduction of unit energy consumption by 1% or more per annum
		Reduction of fiscal 2010 unit energy consumption to 80% of the 1990 level (Japan Chemical Industry Association target)
	<ul style="list-style-type: none"> Volume of waste disposal at landfill sites 	Maintaining zero emissions, a target of 105 tons or lower
	<ul style="list-style-type: none"> Reduction in chemical substance emissions 	50% reduction in chemical substance emissions from fiscal 2003 levels in fiscal 2010
	Atmosphere	
	<ul style="list-style-type: none"> SOx emissions 	Below 100 tons*4
	<ul style="list-style-type: none"> NOx emissions 	Below 610 tons*4
	<ul style="list-style-type: none"> Dust emissions 	Below 110 tons*4
	Water	
	<ul style="list-style-type: none"> Fresh water usage volume 	—
	<ul style="list-style-type: none"> COD levels 	Below 920 tons*5
	<ul style="list-style-type: none"> Nitrogen levels 	Below 850 tons*5
	<ul style="list-style-type: none"> Phosphorous levels 	Below 25 tons*5
	Disasters, accidents	Record no labor/work or environment/safety-related accidents
Distribution environment and safety	Rationalization of distribution, assurance of environmental and safety in distribution	
[Administration]		
Green Office Plan (GOP)	Reduction of at least 1% per annum in power consumption Reduction in copy paper use of 5% below fiscal 2006 levels over 3 years Green purchasing of 80% in fiscal 2008 (value basis)	
Team Minus 6%	Participation in Team Minus 6% activities	
Guideline for Action 3 Consider the environment throughout the entire product life cycle	LCA/Material balance	Transparency and analysis in material balance at each business
	Green procurement	Implementation of environmental consideration inquiries at business partner companies
Guideline for Action 4 Upgrade environmental and safety assessments	Thorough environmental, safety and product safety assessments	Thorough environmental and safety assessment, risk management
Guideline for Action 5 Develop new products and technologies	Environment-conscious technology and product development	Realization of development of technologies and products
Guideline for Action 6 Provide safe and useful products	Assurance of consumer safety and product user-friendliness	Comprehensive product information and disclosure

★1 The Kyowa Eco-Index compares unit emissions with Japanese averages on a production value basis.
 • CO₂, air-pollution, waste index = [Total emissions by the Group / Total emissions in Japan] / [Total production value by the Group / Japan's net domestic product]
 SOx, NOx, dust emission volume: Emissions in fiscal 2005, based on survey of fixed sources affecting the atmospheric environment (Environmental Statistics Book 2009, Environmental Policy Bureau, Ministry of the Environment, Japan)
 Waste emission volume, landfill volume: Industrial waste volume, treatment status in fiscal 2006 (December 18, 2008, report from the Ministry of the Environment website)

Net domestic product: Statistical data (Economic and Social Research Institute, Cabinet Office, Government of Japan)
 • Water pollution index = [Total emissions by the Group / Total emissions into closed bodies of water] / [Total production value of the Group / Net domestic product of prefectures surrounding closed bodies of water]
 COD, nitrogen, phosphorous: Volume occurring in fiscal 2004 in regions targeted by water regulations (Environmental Statistics Book 2009, Environmental Policy Bureau, Ministry of the Environment, Japan)

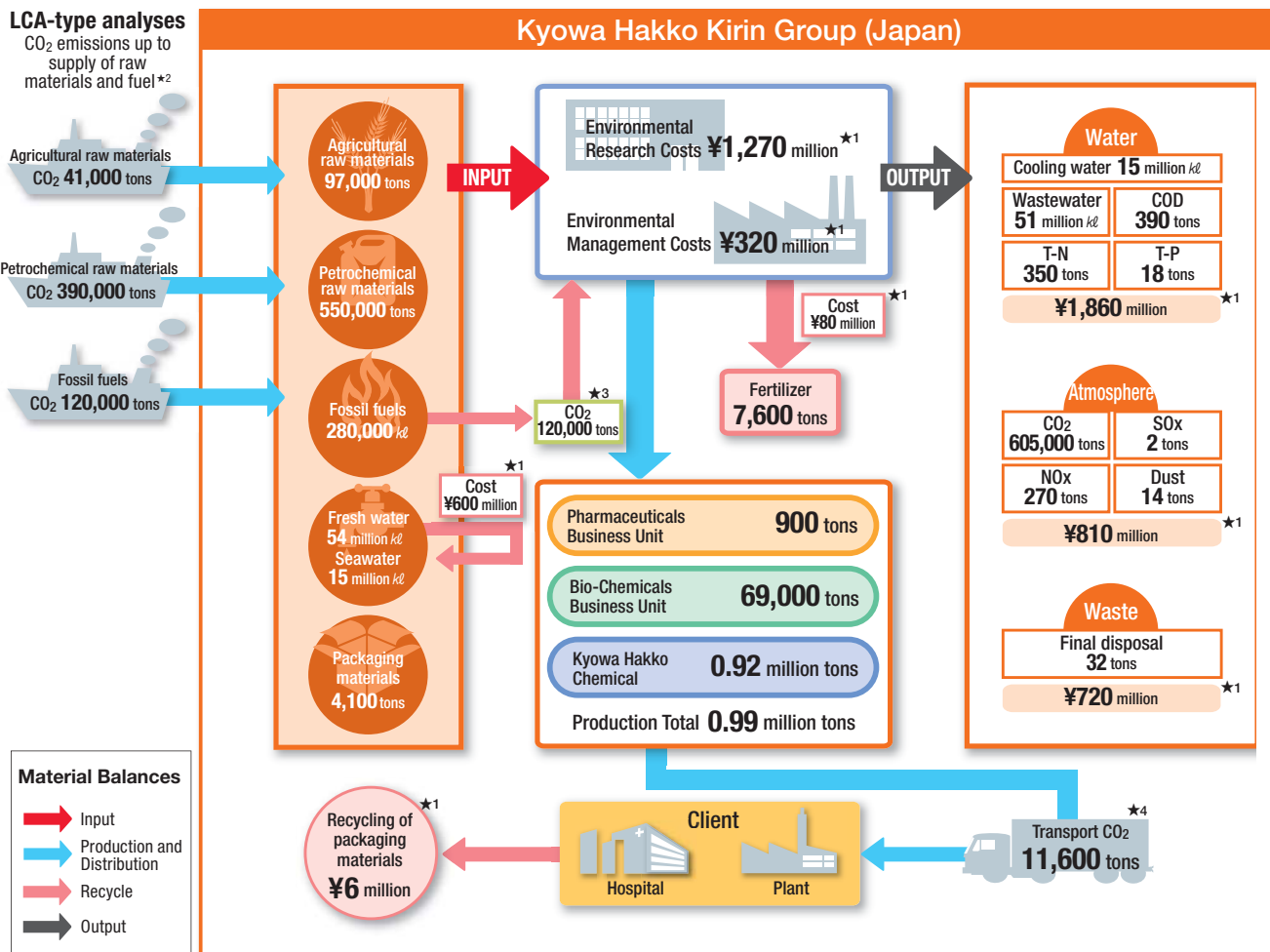
Fiscal 2008 Performance (Status of Progress)		Evaluation*2		Medium-Term* Targets (Kyowa Hakko Kirin)	Page	
Continued renewal of ISO 14001 certification at 10 business sites of Kyowa Hakko Kirin, Kyowa Hakko Bio, Kyowa Hakko Chemical, Kyowa Medex and 2 subsidiaries, Voluntary declaration system set up and launched at 2 companies Preparing to obtain ISO 14001 combined certification in Kyowa Hakko Kirin		◎		ISO 14001 integration and management (Kyowa Hakko Kirin) Development of a waste recycling governance system	P23	
Environment and safety management systems in operation Risk assessments introduced at affiliated companies		◎		Environmental safety risk reduction (accidents, violations)	P23	
Site audits in Japan and other countries (100%)		◎		Audits of consolidated subsidiaries (100%)	P23	
Zero punitive legal infringements concerning environmental safety Decrease to 6 environmental complaints*3 (Noise and vibration: 3, odors: 3)		Kyowa Eco-Index*1		Zero punitive legal infringements concerning environmental safety Reduction in the number of environmental complaints	P23	
		2007	2008			
668,000 tons*3, 5.5% reduction from fiscal 2007 level Installation of a photovoltaic power generation system at Fuji Plant		0.76	0.64	◎	Achieve fiscal 2012 CO ₂ emissions at or below 3% from fiscal 2007 level Promotion of use of renewable energy Preparation of carbon footprint	P19 P20
Periodic updating of freezers that use the chlorofluorocarbon R11 at Fuji Plant (Completed in June 2009)				◎	Periodic updating of freezers that use the chlorofluorocarbon R11	
4% increase from the previous year* at 8 principal plants				×	Average reduction in unit energy consumption of 1% per year or higher (8 plants)	
Reduction of unit energy consumption at Kyowa Hakko Kirin, Kyowa Hakko Bio, Kyowa Hakko Chemical, Kyowa Medex and other consolidated subsidiaries to 69%, and at Kyowa Hakko Chemical to 98% of the fiscal 1990 level				◎	Reduction of fiscal 2010 unit energy consumption to 80% of the 1990 level (Japan Chemical Industry Association target)	
Continued zero emission status. 32 tons, 20% reduction from the previous year's level		0.0025	0.0020	◎	Final disposal at landfills of less than 105 tons in fiscal 2010	P33
12 chemical substances: 6.8 tons, 31% reduction from fiscal 2003 levels PRTR Class 1 chemical substances: 48.5 tons, 26% increase from fiscal 2003 levels VOCs: 547 tons, 11% reduction from fiscal 2003 levels				○	Reduction of fiscal 2010 chemical substance emissions by 50% from fiscal 2003 level	P35
2.9 tons, 33% decrease from the previous year's level		0.01	0.005	◎	Below 100 tons** in fiscal 2010	P34
276 tons, 10% decrease from the previous year's level		0.5	0.4	◎	Below 610 tons** in fiscal 2010	P34
14.0 tons, 7% increase from the previous year's level		0.31	0.32	◎	Below 110 tons** in fiscal 2010	P34
52.2 million tons, 6% increase from the previous year's level		3.0	2.8	—	Ongoing rationalization of water use	P27
398 tons, 3% increase from the previous year's level		1.1	1.0	◎	Below 920 tons** in fiscal 2010	P34
352 tons, 2% increase from the previous year's level		1.1	1.0	◎	Below 850 tons** in fiscal 2010	P34
18.5 tons, 27% increase from the previous year's level		0.7	0.8	◎	Below 25 tons** in fiscal 2010	P34
Recorded one labor/work accident with absence and one accident at consolidated subsidiaries*3, no environment safety-related accidents, and two safety-related accidents				×	Record no labor/work or environment/safety-related accidents	P17 P18, 23
Submission of periodic report and plan for consigners specified by the Act Concerning the Rational Use of Energy, and year-on-year improvement in unit energy consumption (Kyowa Hakko Kirin, Kyowa Hakko Chemical) Low-emission cars accounted for 100% of cars in business use				◎	Rationalization of distribution, ensure environmental safety in distribution Replace 1,000 cars in business use with hybrids by fiscal 2014	P18 P17
4% increase from the previous year's level because of merger, per-person amounts decreased				○	1% or higher reduction in electricity use per year from second half of fiscal 2008 level	P31
14% increase from the previous year's level because of merger, per-person amounts increased due to change existing procedure				×	5% reduction in copy paper use from second half of fiscal 2008 level over 3 years	P31
Green purchasing of 81% of copy paper and office supplies				◎	Maintaining green purchasing at 80% or above	P31
Register and start activities in Team Minus 6%				◎	Carrying on the Team Minus 6% campaign "1 person, one day, 1kg CO ₂ reduction" and participation ratio of 80% or above	P31
LCA-type analyses of material balance and environmental loads, continued assessments of each company's resource efficiency and unit emissions				◎	Ongoing business assessments through LCA/material balance assessments	P27, 28
Revision of green procurement guidelines				◎	Procurement of raw materials, office supplies, facilities, and other items with low environmental impact (green procurement)	P15
Confirmation of environmental and safety assessment implementation through environmental and safety audits at each business site Checking of product safety data acquisition status at productization meetings				◎	Strengthening of risk assessment and comprehensive machinery safety standard Acquisition of product safety data	P24
Group Environment and Safety Committee discussion of the results of environment-friendly technology and product development Continuation of green sustainable chemistry research				◎	Environment-friendly technology and product development Continuation of green sustainable chemistry research	P21, 22
Creation of Chemical Safety Report by Japan Challenge Program Acetaldehyde Consortium with the participation of Kyowa Hakko Chemical Pre-register of the REACH system within a fixed time limit				◎	Acquirement and transmitting safety data on chemicals sponsored by us in the Japan Challenge Program Register of substances under the REACH system within a fixed time limit	P24

Net domestic product of prefectures surrounding closed bodies of water: Fiscal 2006 Prefecture Economic Accounts (Economic and Social Research Institute, Cabinet Office, Government of Japan)
 • Fresh water usage volume index = [(the Group's total usage volume / Japan's total usage volume) / (the Group's total production value / Japan's net domestic product)]
 Fresh water usage volume: Fiscal 2004 domestic non-commercial water (14.2 billion tons) + industrial water fresh water replacement volume (11.1 billion tons)
 (Data: Water Resources Department, Ministry of Land, Infrastructure and Transport)

★3 This figure is for the production and research sites of Kyowa Hakko Kirin, Kyowa Hakko Bio, Kyowa Hakko Chemical, and Kyowa Hakko Food Specialties and its food-related subsidiaries. CO₂, unit energy consumption and complaints and accident performance for Daiichi Fine Chemical have been added.
 ★4 This is a target that takes into account boiler fuel conversion.
 ★5 The target is 50% below the site's self-imposed target level.

★2 Evaluation ◎: Achieved target ○: Change in the scope of aggregation ×: Target not reached

Material Balance by the Kyowa Hakko Kirin Group Business Operations



Resource Efficiency

Year-on-year Evaluation / ↗: Deterioration →: Unchanged ↘: Improvement

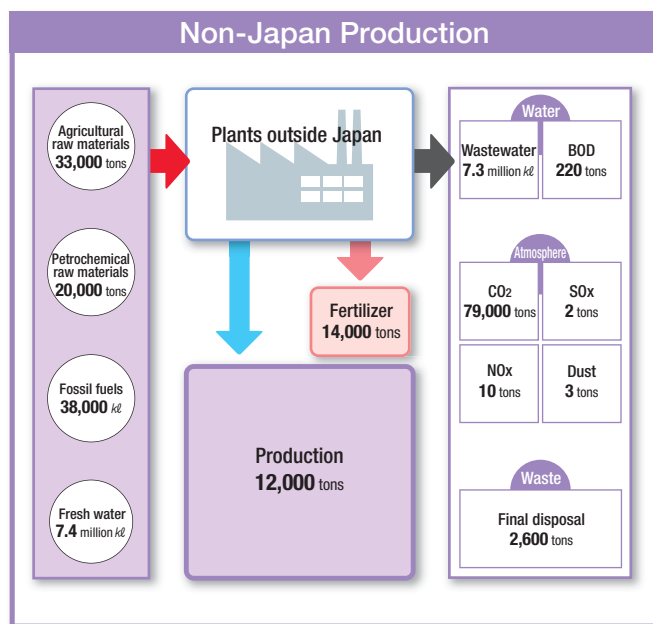
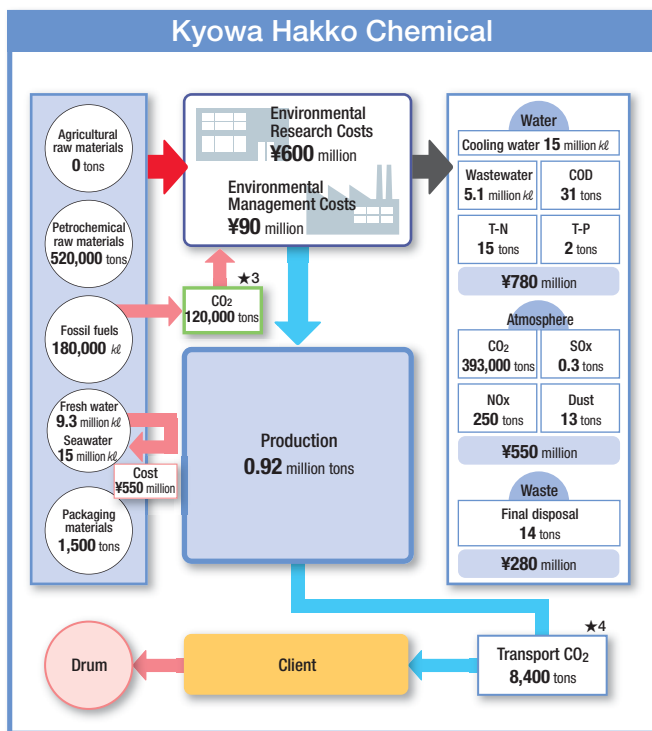
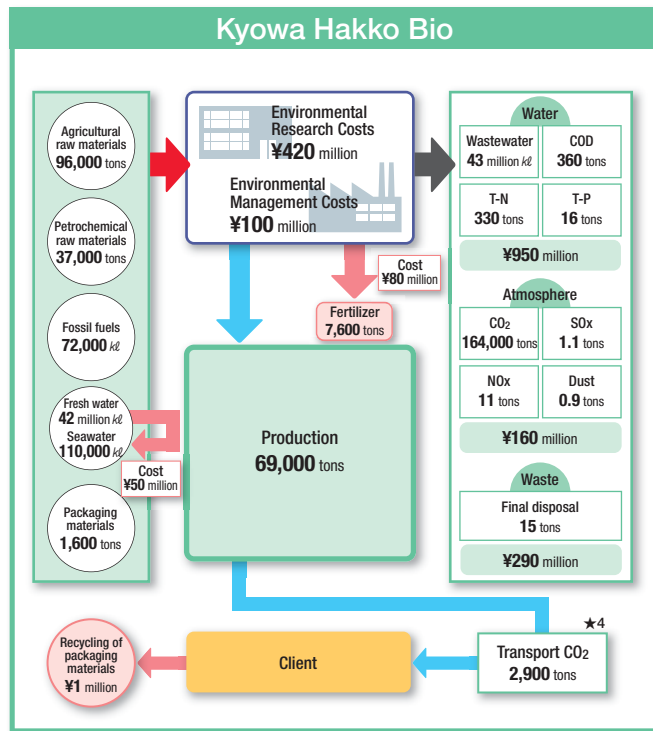
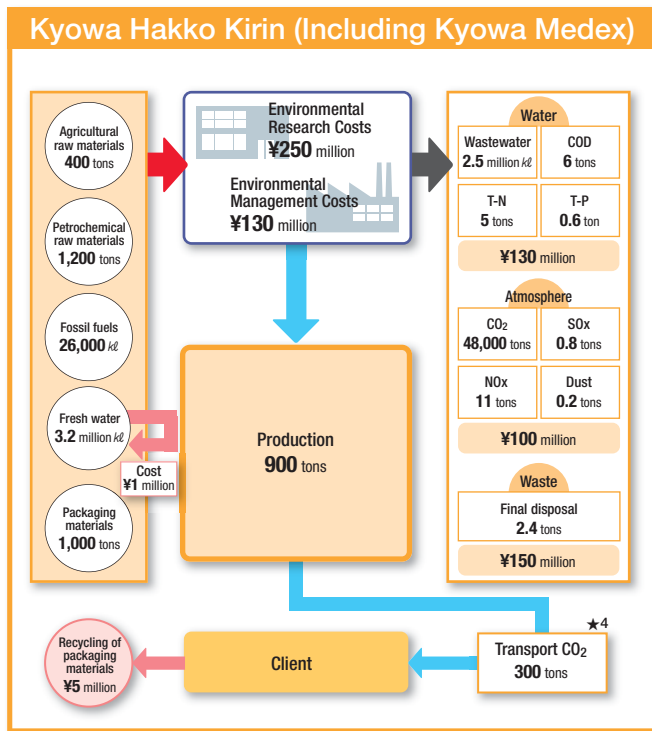
		Kyowa Hakko Kirin (Including Kyowa Medex)	Kyowa Hakko Bio (Including outsourced production of food products)	Kyowa Hakko Chemical	Kyowa Hakko Kirin Group
Resource Efficiency*5	tons/¥100 million sales	1.13 ↘	320 →	657 →	242 —
	tons/tons of production	1.95 ↗	1.93 →	0.56 →	0.65 —
Fuel Efficiency*6	kL/¥100 million sales	17.3 →	173 →	229 →	103 —
	kL/tons of production	29.9 ↗	1.0 →	0.19 →	0.28 —
Packaging Materials Efficiency	tons/¥100 million sales	0.66 ↘	3.9 ↗	1.9 →	1.5 —
	tons/tons of production	1.13 ↗	0.023 ↗	0.0016 →	0.0041 —
Fresh Water Resource Efficiency	1,000kL/¥100 million sales	2.15 ↘	101 →	12 ↗	20 —
	1,000kL/tons of production	3.7 →	0.61 →	0.010 ↗	0.055 —

Unit Emissions

Year-on-year Evaluation / ↗: Deterioration →: Unchanged ↘: Improvement

		Kyowa Hakko Kirin (Including Kyowa Medex)	Kyowa Hakko Bio (Including outsourced production of food products)	Kyowa Hakko Chemical	Kyowa Hakko Kirin Group
Unit CO ₂ Emissions	tons/¥100 million sales	31.9 →	395 →	500 →	225 —
Unit Final Disposal	tons/¥100 million sales	0.002 ↘	0.04 ↗	0.02 ↘	0.012 —
Unit Water Pollution Emissions*7	tons/¥100 million sales	0.007 ↘	1.7 →	0.06 ↗	0.28 —
Unit Air Pollution Emissions*8	tons/¥100 million sales	0.008 ↘	0.03 ↘	0.33 →	0.11 —

* Since Kirin Kyowa Foods became an equity-method affiliate in 2009 and has been excluded from the scope of the report except for outsourced production of food products, year-on-year evaluation is not reported.



- ★1 The figures shown here were extracted from the environmental accounts.
- ★2 JLCA-LCA Database 2004 (2nd Edition), An Introduction to LCA Administration—Environmental Load of 4,000 Social Stocks, Japan Environmental Management Association for Industry (JEMA) (1998)
- ★3 The amount of CO₂ fixed in products by means of the oxo process
- ★4 As the consignor, CO₂ emission figures corresponding to the provisions of the Act Concerning the Rational Use of Energy have been used
- ★5 Index of total usage of agricultural and petrochemical raw materials
- ★6 Index of crude oil conversion to express energy usage in kℓ
- ★7 Index of total COD, N and P levels
- ★8 Index of total SO_x, NO_x and dust emissions

Environmental Accounting

Environmental Protection Costs

		(Millions of yen)			
Breakdown	Principal Activities (FY2008)	FY2007		FY2008	
		Investment	Expense	Investment	Expense
(1) In-Situ Operating Costs		611	4,285	550	4,277
(1)-1 Pollution Control Costs					
1) Water pollution control	Investment and expense for water pollution control facilities	458	1,880	192	1,956
2) Air pollution control, etc.	Investment and maintenance expense for air pollution control facilities, deodorization facilities, etc.	24	440	108	372
(1)-2 Global Environmental Protection Costs					
(1)-2 Global Environmental Protection Costs	Investment in CFC substitute refrigerators, expense for CO ₂ for the oxo process	87	563	229	489
(1)-3 Resource Recycling Costs					
(1)-3 Resource Recycling Costs	Investment and maintenance expense for dewatering equipment, waste recycling and treatment facilities, etc.	42	1,402	21	1,460
(2) Upstream and Downstream Costs					
(2) Upstream and Downstream Costs	Expense for green purchasing and the recycling of containers and packaging	6	39	0	48
(3) Environmental Activities Costs					
(3) Environmental Activities Costs	Expense for environmental management systems operation, observation of environmental impact, etc.	17	464	17	465
(4) R&D Costs					
(4) R&D Costs	Expense for R&D of environment-friendly products and R&D to control environmental impact	6	1,456	14	2,048
(5) Community Activities Costs					
(5) Community Activities Costs	Expense for environmental protection activities and for participation in and cooperation with environmental protection and nature conservation activities	0	13	0	15
(6) Environmental Damage-related Costs					
(6) Environmental Damage-related Costs	Expense for oil pollution liability insurance	0	1	0	8
Total		640	6,258	581	6,861

		(Millions of yen)	
Item	Activities (FY2008)	FY2007	FY2008
Total Investment	Upgrading and expansion of clinical testing, antibody drug manufacturing facilities and installation of bulk pharmaceuticals manufacturing facilities, etc.	12,633	17,222
Total R&D Costs	R&D of new products and technologies	32,413	48,057
Sales of Items Related to Resource Recycling as in (1)-3 and (2)	Sale of dried fungus fertilizer, used catalysts, and by-product oil	109	117
Effect Related to Saving Resources as in (1)-2 and 3	Energy and resource conservation and waste reduction	2,007	68

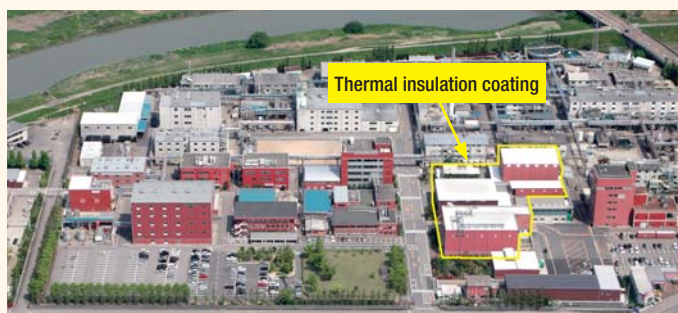
- The period covered is fiscal 2008, from April 1, 2008 to March 31, 2009 (equivalent to the period covered in the fiscal 2007 report), and calculations are based on the Environmental Accounting Guidelines 2005 of the Ministry of the Environment.
- Green purchasing statistics represent the purchase amount of environmental-friendly products, including Eco Mark products, and have been included as reference information.

Energy Conservation Activities at Daiichi Fine Chemical

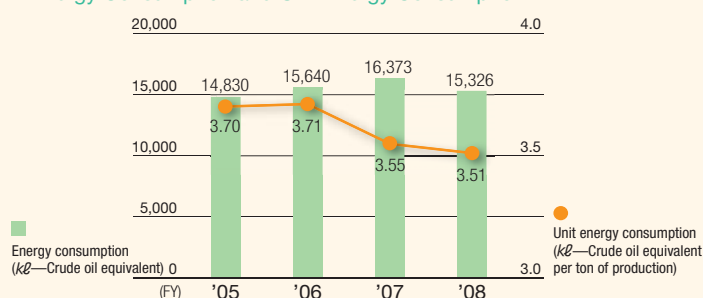
Takeshi Fujimaki

Facilities Department
Daiichi Fine Chemical Co., Ltd.

Energy conservation activities at Daiichi Fine Chemical began in 1974, the year following the first oil shock, with the launch of the Energy Conservation Measures Team and the start of drain recovery energy conservation activities prompted by the large quantities of steam used in production. The name of the organization was changed to the Energy Conservation Committee in 1995. Today, 13 committee members and 25 workplace promoters drive energy conservation activities, conducting twice yearly energy conservation joint conferences and energy conservation patrols to enhance energy conservation activities. The Energy Conservation Committee plays a central role in the steady implementation of reductions in unit energy consumption by means including upgrading to energy-saving equipment and the use of thermal insulation coating. The company is committed to steadily continuing its energy conservation activities.



Energy Consumption and Unit Energy Consumption





Shanghai Kyowa Amino Acid Co., Ltd.

Shanghai Kyowa Amino Acid (Sep. 10, 2009)

Shanghai Kyowa Amino Acid was established in 1998 and moved to the Qingpu Industrial Zone in a suburb of Shanghai in 2006 in order to expand. The company has introduced Kyowa Hakko Bio's latest technologies, and operates a GMP quality assurance system to produce amino acids for pharmaceuticals and health foods that meet diverse needs of users worldwide.

Shanghai Kyowa Amino Acid has established an environment and safety policy, which is published in the employee handbook, and engages in safety activities such as safety patrols, safety education and safety meetings. In fiscal 2009, the company introduced risk assessment and began comprehensive and detailed assessment activities. To cope with production volume increases, the company has expanded and upgraded its liquid-waste treatment facilities and increased treatment capacity. It has also installed facilities to recover ammonia in waste liquid. Furthermore, it engages in energy conservation activities and has improved unit energy consumption for two consecutive years.



A liquid-waste treatment facility

Kirin Kumpeng (China) Bio-Pharmaceutical (Sep. 11, 2009)

Kirin Kumpeng (China) Bio-Pharmaceutical was established in 1997 in Zhangjiang High Technology Park in Shanghai. The company has introduced Kyowa Hakko Kirin's latest technologies and implements rigorous GMP management to produce and supply high-quality pharmaceuticals such as GRAN® and ESPO®.

Kirin Kumpeng (China) Bio-Pharmaceutical has developed and implemented a plant safety management system under the direction of the company president, who chairs the Safety and Production Management Committee. It develops annual plans for 5S activities, comprising production safety, workplace health, disaster preparedness and safety education and implements activities under those plans. It also appropriately manages environmental activities, such as the management of liquid-waste treatment facilities. Although energy use has trended up since 2006 in step with increases in production volume, the company forecasts a year-on-year decrease in energy use for the current fiscal year thanks to energy conservation activities.



Kirin Kumpeng (China) Bio-Pharmaceutical Co., Ltd.



ESPO®



GRAN®

Eco-project

Eco-project Targets

- To reduce the Group's CO₂ emissions by 3% from the fiscal 2007 level by fiscal 2012
- To reduce unit energy consumption by 1% per year
- To achieve zero emissions group-wide*

The Eco-project, launched in 1998, is the core of global warming prevention and zero emissions activities at the Kyowa Hakko Kirin Group's production and research sites. In June 2009, the Group held the annual Eco-project debriefing session, where 40 participants from 17 business sites introduced zero emissions activities case studies and engaged in question-and-answer sessions.



The Eco-project debriefing session

* The target is final disposal at landfills for the Group of 105 tons or less in fiscal 2010. 105 tons is equivalent to 0.1% of the 105,000 tons of waste generated in fiscal 2006.

The Green Office Plan (GOP)

GOP Targets

- To reduce electricity consumption by at least 1% per year
- To reduce copy paper use by 5% from the fiscal 2006 level over three years
- To achieve a green purchasing ratio of 80% in fiscal 2008

The Kyowa Hakko Kirin Group has reaffirmed the Green Office Plan (GOP) as part of its ISO 14001 activities. The GOP sets forth shared environmental protection activities conducted by the administrative sections at the head office, plants, research facilities and sales offices.



A poster promoting resource recycling



Kirin Fujisanroku Forest Conservation Activities

Water-related problems have become the single most important environmental issue that must be addressed to preserve our bountiful way of life. The Kyowa Hakko Kirin Group engages in conservation activities to maintain forest areas surrounding headwaters in a condition of health and vitality for future generations.

As part of its environmental activities, the Fuji Plant has begun joint sponsorship with Kirin Distillery of Kirin Fujisanroku Forest Conservation Activities, an environmental initiative of the Kirin Group, and participated in activities on May 23, 2009 as a member of Kirin Team Shizuoka. About 70 participating employees and family members worked for two hours, either participating in clean cutting and felling work or attending an environment and crafts class. To ensure the continuation of effective forest conservation activities for many years, the activities planners intend to make use of the results of a participant questionnaire when planning future activities.

Activities at the Kyowa Hakko Kirin Takasaki Plant

As part of a Kirin Group centennial anniversary program, on October 6, 2007, the former Kirin Pharma conducted the first round of Kirin Takasaki Forest Conservation Activities with the aim of promoting harmonious coexistence with society. At that time, employees and their families participated in events such as a ceremony to conclude a forest conservation agreement and engaged in tree planting and thinning under the guidance of a local NPO and forestry cooperative. In the second round of activities, the participants engaged in thinning and mowing on October 4, 2008 (after the launch of Kyowa Hakko Kirin). The third round was held on October 3, 2009.



Forest conservation in the Takasaki headwater area

Activities at Kyowa Hakko Bio Yamaguchi Production Center Hofu

Each year in June, designated as Seto Inland Sea Environmental Conservation Month, the Yamaguchi Production Center Hofu engages in clean-up work in the vicinity of an adjacent port. This year, 69 employees participated in the 30 Million Persons Seto Inland Sea Clean-Up Campaign cosponsored by the Ministry of Land, Infrastructure and Transport and other organizations, collecting approximately 400 kilograms of empty cans, bottles and burnable trash in trash

bags. Although the participants had to contend with tires and other large items of trash, following their labors they felt invigorated by the sight of the immaculate port area. The center will carry on with wide-ranging environmental activities to ensure that future generations enjoy a wholesome Seto Inland Sea environment.



Participants in the Seto Inland Sea Clean-Up Campaign

Activities at the Kyowa Medex Fuji Plant

The Kano River is a familiar presence to area residents that is used as a playground for children and as a source of agricultural and industrial water supply. The Kano River System Water Quality Conservation Council engages in activities to preserve the water quality of the Kano River, and Kyowa Medex supports those activities, engaging in river clean-up activities and the release of Amago trout into the river. The employees engage in activities several times a year in the hope that the shouts of happy children will reverberate in the Kano River area for all time.



The release of Amago trout

Zero Emissions and Water Pollution Prevention

Medium-term Targets

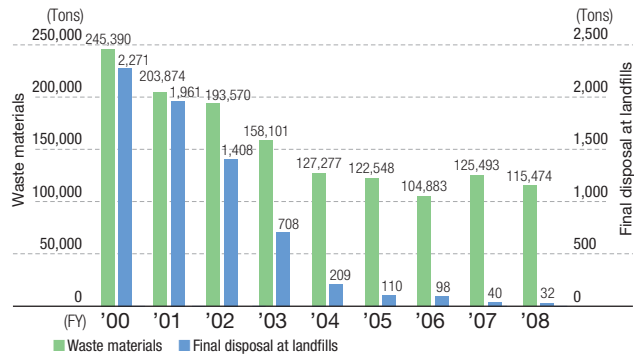
Final disposal at landfills in fiscal 2010 of 105 tons or less*

* In addition to recycling, the Kyowa Hakko Kirin Group deals with waste materials that require appropriate disposal through incineration. The Group's zero emission strategy, therefore, calls for final disposal at landfills (which involves a high environmental risk) of no more than 0.1% of total waste. The original target was to achieve a level at or below 105 tons (0.1% of 105,000 tons, the total in fiscal 2006) by 2010.

Zero Emissions Activities

In fiscal 2008, the Kyowa Hakko Kirin Group achieved the Eco-project target of zero emissions for the fourth consecutive year. The Group generated 115,474 tons of waste, and final waste disposal at landfills was 32 tons, bettering the target of 105 tons or less. We began to place emphasis on a waste governance system in fiscal 2008, seeking to develop a system of waste contractor audits and waste disposal contract reviews for business sites to use in confirming the suitability of contractors.

Trends in Waste Materials and Final Disposal at Landfills

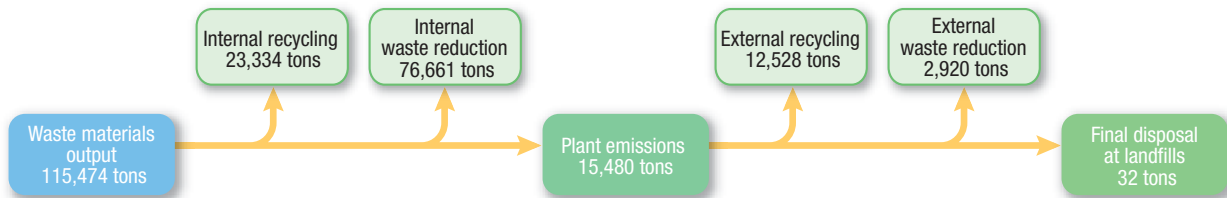


Measures Concerning Polychlorinated Biphenyls (PCBs)

Condensers, transformers and circuit breakers	126
Lighting stabilizers	3,750
Insulation oil containing PCBs	1,301 ℓ

(As of March 31, 2009)

Overall flow of waste recycling and disposal (FY2008)



Water Pollution Prevention Measures

To produce beneficial substances such as the desired amino acids and nucleic acids, the fermentation industry cultures microorganisms using culture media that contain sugars, ammonia, phosphoric acid and other ingredients necessary for microorganism growth and development. For this reason, the fermentation wastewater contains large quantities of water pollutants such as nitrogen and phosphoric acid, and consequently has high chemical oxygen demand (COD).

The fermentation industry's principal production sites are Hofu and Ube in Yamaguchi Prefecture, located on the shores of the Seto Inland Sea. For many years, the most important environmental issue facing companies in the industry has been prevention of eutrophication as mandated

by the Law Concerning Special Measures for Conservation of the Environment of the Seto Inland Sea, which went into effect in the 1970s. For the past 40 years, the Group has assiduously pursued technological improvements, including the conversion of highly concentrated fermentation wastewater to fertilizer, the commercialization of a biological denitrification and dephosphorization technology (the DENIP process), conversion from molasses raw material to glucose and other raw materials with low COD, the recovery of ammonia from refining processes, wastewater treatment facilities improvement through the introduction of high-efficiency aeration pipes and the recovery of phosphoric acid from wastewater. The result has been a reduction in COD levels, and nitrogen and phosphorous emitted from the Group's production centers into the enclosed coastal sea.

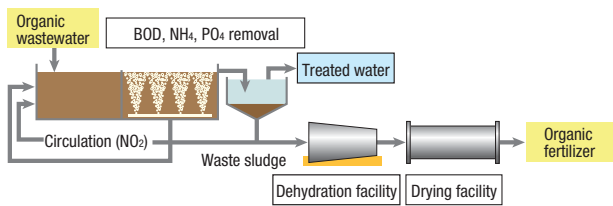
Medium-term Targets	COD	less than 920 tons (fiscal 2010)	SOx Emissions	less than 100 tons (fiscal 2010)
	Nitrogen Emissions	less than 850 tons (fiscal 2010)	NOx Emissions	less than 610 tons (fiscal 2010)
	Phosphorous Emissions	less than 25 tons (fiscal 2010)	Dust Emissions	less than 110 tons (fiscal 2010)

According to an environmental white paper published by Yamaguchi Prefecture, there were 12 instances of red tide in the Yamaguchi Prefecture Seto Inland Sea area in fiscal 2007, and the number of cases has ranged from 11 to 15 during the past three years. It has also been reported that the red tide-causing plankton mostly consists of noctiluca (luminescent organisms). Although these figures show eutrophication-caused red tide damage in the western area of the Seto Inland Sea is not severe at this time, to properly fulfill our corporate social responsibility by observing the targets

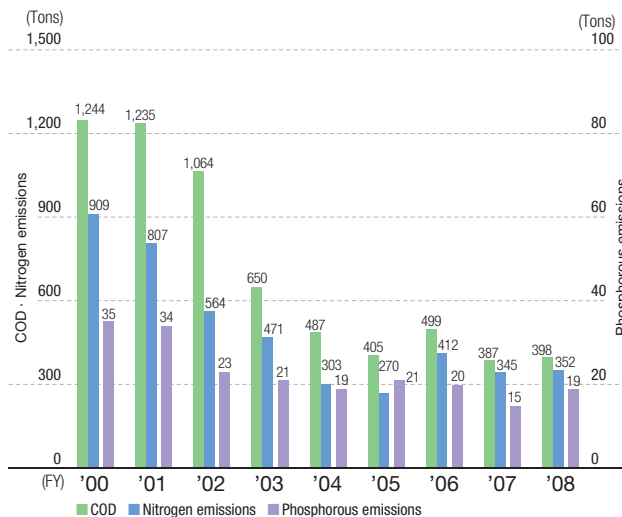


A phosphoric acid recovery facility dehydrator

Biological Denitrification and Dephosphorization Treatment (the DENIP Process)



COD, Nitrogen and Phosphorous Emissions



in the seventh total pollutant load control system, we pay careful attention to the stable operation of wastewater treatment facilities and aim to achieve further reductions in water pollutant emissions.

Air Pollution Prevention Measures

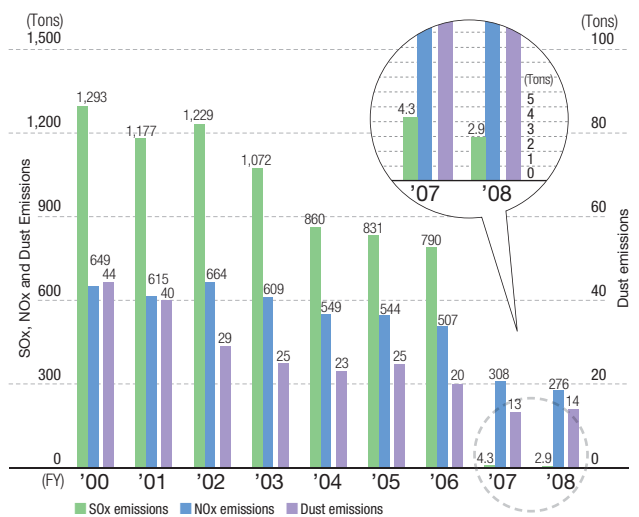
The Kyowa Hakko Kirin Group is actively investing in facilities for the purpose of reducing greenhouse gas emissions and preventing air pollution, for instance boiler fuel conversion.

Whereas the Group*¹ emitted 1,293 tons of SOx, 649 tons of NOx and 44 tons of dust into the environment in fiscal 2000, thanks to reductions in SOx, NOx and dust emissions from fuel sources resulting from fuel conversion, in fiscal 2008 the Group*² achieved substantial emissions reductions, emitting 2.9 tons of SOx (down 99.8% from fiscal 2000), 276 tons of NOx (down 57.5%) and 14 tons of dust (down 68.3%). Furthermore, reductions of 1.4 tons in SOx emissions and 32 tons in NOx emissions from the fiscal 2007 levels indicate that the downtrend continues. These cuts in air pollutant emissions may contribute to improvement in emissions of oxidants, fine particulate matter and other substances that have recently attracted attention as environmental factors.

*1 The former Kyowa Hakko, Kyowa Hakko Food Specialties, Kyowa Hakko Chemical and affiliates

*2 Kyowa Hakko Kirin (including the Takasaki Plant), Kyowa Hakko Chemical Kyowa Hakko Bio, Kirin Kyowa Foods and affiliates

SOx, NOx and Dust Emissions



Chemical Substance Reduction

Medium-term Targets

50% reduction in chemical substance emissions from fiscal 2003 levels in fiscal 2010

Curbing Emissions of 12 Chemical Substances

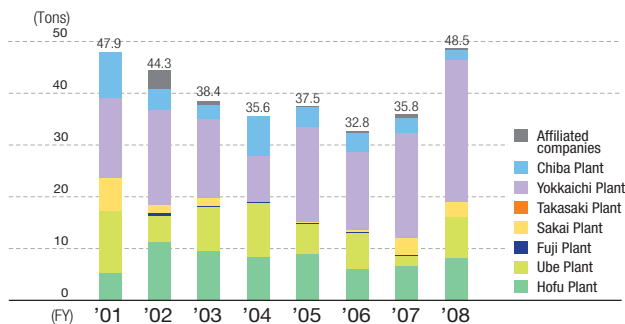
Fiscal 2008 emissions into the environment of 12 chemical substances targeted by the chemical industry for priority emissions reduction efforts decreased to 6.8 tons from 9.4 tons the previous fiscal year. The improvement is attributable to a year-on-year reduction in the amount of benzene handled by the Group.

Curbing Emissions of PRTR* Law Class I Chemical Substances

The total volume of PRTR Law Class I chemical substances handled by the Group was 240 thousand tons in fiscal 2008. Although emissions into the environment was 48.5 tons, which increased by 12.7 tons from the previous fiscal year, the increase is attributable to a 50% increase in the amount exhaust gas CO₂ recovered from the boilers and subsequently used in the oxo process at the Yokkaichi Plant. We will strive to restrain emissions in the coming years.

The Group also ascertains emissions into the environment of 481 substances and reports on those emissions to the Japan Chemical Industry Association as a voluntary chemical substance control measure.

Total Emissions of Class 1 Chemical Substances



* PRTR: Pollutant Release and Transfer Register, relating to release amounts of specific chemical substances in the environment.

Managing Soil Pollution Risk

On the basis of soil pollution countermeasure regulations established in 2004, the Group conducts surveys when buying or selling land and when discontinuing the use of regulated substances. In fiscal 2008, we conducted an independent study at one location and installed a groundwater pump-and-treat system at one business site.

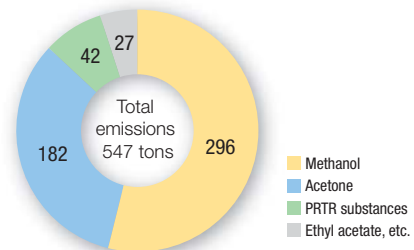
Preventing Ozone Layer Depletion

The Group is implementing periodic updates of large freezers at 15 business sites. Emissions of specified chlorofluorocarbons (CFCs) in fiscal 2008 decreased to 1.36 tons, a 20% reduction from the previous year.

Reducing Volatile Organic Compound (VOC) Emissions

The Group continues to implement activities to reduce VOC emissions by 50% (308 tons) from the fiscal 2003 level in fiscal 2010. We have budgeted the installation of facilities to reduce acetone emissions from the current high level in fiscal 2010 and launched a project to reduce methanol emissions.

Emissions of Volatile Organic Compounds (Fiscal 2008)



1 Fuji Plant/Fuji Research Park, Kyowa Hakko Kirin



Location 1188 Shimotogari, Nagaiizumi-cho, Sunto-gun, Shizuoka 411-8731
Telephone +81-55-986-7600
Site area 65,000 m²
Main activities Pharmaceuticals
ISO 14001 Combined Certification* May 29, 2009

Initiative	Fiscal 2007	Fiscal 2008	
	Performance	Performance	Comparison
Unit energy consumption (kℓ ⁺ /m ² -floor area)	0.213	0.209	98%
SOx emissions (tons/year)	0.24	0.08	33%
NOx emissions (tons/year)	2.9	2.7	95%
Dust emissions (tons/year)	0	0	—
Wastewater volume (million tons/year)	2.5	2.2	89%
COD levels (tons/year)	4.3	3.7	86%
Nitrogen levels (tons/year)	4.9	3.2	64%
Phosphorous levels (tons/year)	0.49	0.44	89%
Volume of waste materials (tons/year)	625	639	102%
Volume of waste disposal at landfill sites (tons/year)	0	0	—

*1 crude-oil equivalent

2 Sakai Plant, Kyowa Hakko Kirin



Location 1-1-53 Takasu-cho, Sakai-ku, Sakai-shi, Osaka 590-8554
Telephone +81-72-223-5554
Site area 21,000 m²
Main activities Pharmaceuticals
ISO 14001 Combined Certification* May 29, 2009

Initiative	Fiscal 2007	Fiscal 2008	
	Performance	Performance	Comparison
Unit energy consumption (kℓ ⁺ /m ² -floor area)	0.138	0.132	96%
SOx emissions (tons/year)	0	0	—
NOx emissions (tons/year)	0.40	0.35	89%
Dust emissions (tons/year)	0	0	—
Wastewater volume (million tons/year)	0.064	0.042	67%
COD levels (tons/year)	3.1	1.1	35%
Nitrogen levels (tons/year)	0.4	0.6	158%
Phosphorous levels (tons/year)	0.12	0.11	88%
Volume of waste materials (tons/year)	332	257	77%
Volume of waste disposal at landfill sites (tons/year)	4	1.2	32%

*1 crude-oil equivalent

3 Takasaki Plant, Kyowa Hakko Kirin



Location 100-1 Hagiwara-cho, Takasaki-shi, Gunma 370-0013
Telephone +81-27-353-2011
Site area 125,000 m²
Main activities Pharmaceuticals
ISO 14001 Combined Certification* May 29, 2009

Initiative	Fiscal 2007	Fiscal 2008	
	Performance	Performance	Comparison
Unit energy consumption (kℓ ⁺ /¥100 million of production)	16.6	21.1	127%
SOx emissions (tons/year)	0	0	—
NOx emissions (tons/year)	2.8	2.8	100%
Dust emissions (tons/year)	0.07	0.03	43%
Wastewater volume (million tons/year)	0.21	0.15	68%
COD levels (tons/year)	0.66	0.45	68%
Nitrogen levels (tons/year)	1.63	0.57	35%
Phosphorous levels (tons/year)	0.11	0.08	73%
Volume of waste materials (tons/year)	165	300	182%
Volume of waste disposal at landfill sites (tons/year)	0.3	0.2	67%

*1 crude-oil equivalent

4 Tokyo Research Park, Kyowa Hakko Kirin



Location 3-6-6 Asahi-machi, Machida-shi, Tokyo 194-8533
Telephone +81-42-725-2555
Site area 31,071 m²
Main activities Pharmaceuticals (basic research)
ISO 14001 Combined Certification* May 29, 2009

Initiative	Fiscal 2007	Fiscal 2008	
	Performance	Performance	Comparison
Unit energy consumption (kℓ ⁺ /m ² -floor area)	0.084	0.086	102%
SOx emissions (tons/year)	0	0	—
NOx emissions (tons/year)	0.05	0.03	60%
Dust emissions (tons/year)	0	0	—
Wastewater volume (million tons/year)	0.009	0.007	77%
COD levels (tons/year)	0.12	0.11	88%
Nitrogen levels (tons/year)	0.0001	0.0001	100%
Phosphorous levels (tons/year)	0.0001	0.0001	100%
Volume of waste materials (tons/year)	68	91	134%
Volume of waste disposal at landfill sites (tons/year)	0.2	0.3	150%

*1 crude-oil equivalent

★ In May 2009, eight business sites received combined certification as one body.

⑤ Yamaguchi Production Center Hofu, Kyowa Hakko Bio



Location 1-1 Kyowa-machi, Hofu-shi, Yamaguchi 747-8522
Telephone +81-835-22-2511
Site area 694,000 m²
Main activities Biochemicals, alcohol pharmaceuticals, foodstuffs
ISO 14001 Certification July 26, 1999

Initiative	Fiscal 2007	Fiscal 2008	
	Performance	Performance	Comparison
Unit energy consumption (kcal*/¥100 million of production)	187	185	99%
SOx emissions (tons/year)	2.2	0.3	14%
NOx emissions (tons/year)	14.5	7.9	54%
Dust emissions (tons/year)	0.6	0.8	133%
Wastewater volume (million tons/year)	19	20	105%
COD levels (tons/year)	234	208	89%
Nitrogen levels (tons/year)	273	281	103%
Phosphorous levels (tons/year)	3.5	3.5	100%
Volume of waste materials (tons/year)	77,842	69,229	89%
Volume of waste disposal at landfill sites (tons/year)	6	10	167%

*1 crude-oil equivalent

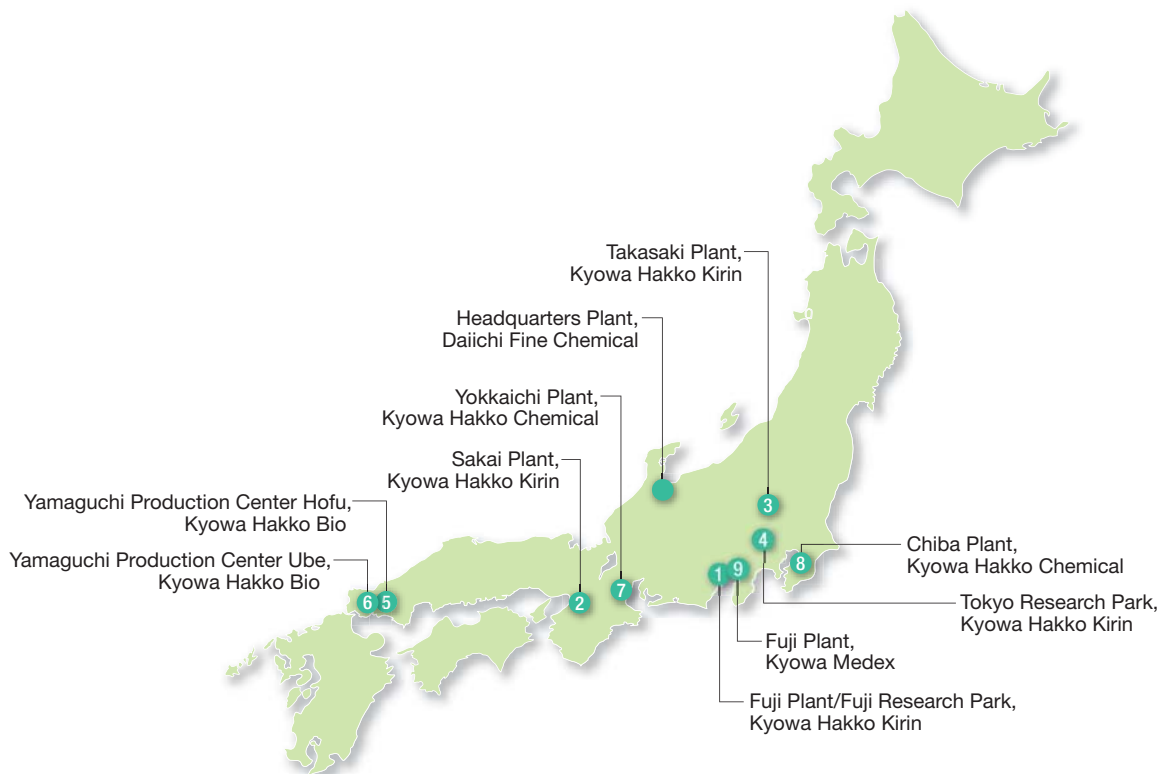
⑥ Yamaguchi Production Center Ube, Kyowa Hakko Bio Including Ube Plant of Kyowa Hakko Kirin



Location 2548 Fujimagari, Ube-shi, Yamaguchi 755-8501
Telephone +81-836-22-5500
Site area 479,000 m²
Main activities Biochemicals, pharmaceuticals
ISO 14001 Certification September 11, 2000

Initiative	Fiscal 2007	Fiscal 2008	
	Performance	Performance	Comparison
Unit energy consumption (kcal*/¥100 million of production)	49	53	109%
SOx emissions (tons/year)	0.8	0.9	118%
NOx emissions (tons/year)	2.1	3.5	167%
Dust emissions (tons/year)	0.02	0.04	206%
Wastewater volume (million tons/year)	20	23	119%
COD levels (tons/year)	113	150	133%
Nitrogen levels (tons/year)	52	49	95%
Phosphorous levels (tons/year)	8.4	12.6	150%
Volume of waste materials (tons/year)	5,901	7,492	127%
Volume of waste disposal at landfill sites (tons/year)	3.4	5	147%

*1 crude-oil equivalent



7 Yokkaichi Plant, Kyowa Hakko Chemical Including Yokkaichi Plant of Kyowa Hakko Kirin



Location 2-3 Daikyo-cho, Yokkaichi-shi, Mie 510-8502
Telephone +81-59-331-0624
Site area 320,000 m²
Main activities Chemicals, pharmaceuticals
ISO 14001 Certification July 23, 2000

Initiative	Fiscal 2007		Fiscal 2008	
	Performance	Performance	Comparison	
Unit energy consumption (ℓ ^{*1} /ton of production)	185	197	106%	
SOx emissions (tons/year)	0	0	—	
NOx emissions (tons/year)	237	215	91%	
Dust emissions (tons/year)	8.7	9.3	107%	
Wastewater volume (million tons/year)	2.72	3.19	117%	
COD levels (tons/year)	9.9	13.0	130%	
Nitrogen levels (tons/year)	2.6	2.6	100%	
Phosphorous levels (tons/year)	1.2	0.8	71%	
Volume of waste materials (tons/year)	38,499	34,613	90%	
Volume of waste disposal at landfill sites (tons/year)	19	11	57%	

*1 crude-oil equivalent

8 Chiba Plant, Kyowa Hakko Chemical



Location 11-1 Goiminamikaigan, Ichihara-shi, Chiba 290-8560
Telephone +81-436-23-9111
Site area 215,000 m²
Main activities Chemicals
ISO 14001 Certification November 27, 2000

Initiative	Fiscal 2007		Fiscal 2008	
	Performance	Performance	Comparison	
Unit energy consumption (ℓ ^{*1} /ton of production)	179	188	105%	
SOx emissions (tons/year)	0.2	0.3	150%	
NOx emissions (tons/year)	41	31	76%	
Dust emissions (tons/year)	3.3	3.4	103%	
Wastewater volume (million tons/year)	1.86	1.88	101%	
COD levels (tons/year)	18.1	18.0	99%	
Nitrogen levels (tons/year)	11.7	12.1	103%	
Phosphorous levels (tons/year)	0.8	0.8	100%	
Volume of waste materials (tons/year)	826	870	105%	
Volume of waste disposal at landfill sites (tons/year)	3	3.5	117%	

*1 crude-oil equivalent

9 Fuji Plant, Kyowa Medex



Location 600-1 Minamiishiki, Nagaizumi-cho, Sunto-gun, Shizuoka 411-0932
Telephone +81-55-988-6000
Site area 24,000 m²
Main activities Diagnostic reagents, medical equipment, contract analysis
ISO 14001 Combined Certification* May 29, 2009

Initiative	Fiscal 2007		Fiscal 2008	
	Performance	Performance	Comparison	
Unit energy consumption (kℓ ^{*1} /¥100 million of production)	15.5	14.9	96%	
SOx emissions (tons/year)	0.44	0.61	139%	
NOx emissions (tons/year)	5.6	4.8	86%	
Dust emissions (tons/year)	0.18	0.14	78%	
Wastewater volume (million tons/year)	0.09	0.06	67%	
COD levels (tons/year)	0.04	0.02	56%	
Nitrogen levels (tons/year)	0.01	0.02	204%	
Phosphorous levels (tons/year)	0.010	0.004	43%	
Volume of waste materials (tons/year)	67	95	141%	
Volume of waste disposal at landfill sites (tons/year)	0	0	—	

*1 crude-oil equivalent

★ In May 2009, eight business sites received combined certification as one body.

Stakeholder Meeting

Kyowa Hakko Kirin has held stakeholder meetings since 2005. This year's meeting was held at Kyowa Hakko Bio Yamaguchi Production Center Ube, following a tour of the facilities. We obtained stakeholder opinions concerning ecosystem protection activities, such as forest conservation.



Date : July 29, 2009

Venue : Kyowa Hakko Bio Yamaguchi Production Center Ube

Theme : Company's Role in Forest Conservation

Forest, River and Sea Ecosystem Conservation

Azuma: One ecosystem conservation activity companies frequently engage in is environmental pollutant emissions reduction. We would like to hear your opinions about what other activities companies can pursue to protect ecosystems. For instance, what about forest conservation?

Yoshimitsu: The Yamaguchi Chuo Forest Owner's Association is engaged in a collaborative activity among people whose livelihoods depend on forests, rivers and the sea. It started when a local fishermen's cooperative pointed out, through the Yamaguchi City government, that devastation of the ocean and decreasing fish catches necessitated consideration of upstream environmental problems. In response, we began the Fushino River basin revitalization activities in 2000 as a joint attempt to resolve the problem. We recruited members of the Fushino River Fisherman's Cooperative, Yamaguchi Chuo Forest Owner's Association and a local agricultural cooperative for a seashore cleanup. We gradually expanded the scope of activities, going to the mountains to thin forests or cleaning up ruined rice paddies and planting them with broad-leaved trees. This year marks the tenth year for these activities, in which 50 to 60 members regularly participate.

Azuma: Is there some particular reason that these activities have continued for ten years?

Takashima: Perhaps it's that fishing people and mountain people engaged in activities together. Rather than people participating only in their own areas of specialization, fishermen thin trees in the mountains and members of the agricultural cooperative and forest owner's association collect trash from the sea.

Yoshimitsu: Observing and trying one's hand at each other's work, such as net handling at sea and tree thinning in the mountains, made the participants appreciate how arduous

other professions are. Although a small first step, this eventually led to a conviction that we must not discard trash in rivers or the sea.

Collaboration Between Forest Owners and Companies

Yoshimitsu: Still, no matter how many volunteer activities people engage in, the fact remains that forest destruction outpaces conservation efforts. Since mountain forests aren't being properly maintained, undergrowth isn't growing, and the topsoil is being rapidly washed away. The forest topsoil contains leaf mold, and when that disappears, a mountain unavoidably shrinks from erosion. It's a vicious cycle. A major cause of this is low timber prices. The financial situation for forest owners has become harsh, and we can no longer urge them to grow trees or manage mountain forests.

Azuma: Isn't the declining number of people who perform forest maintenance another cause of forest destruction?

Yoshimitsu: To be sure, the number is decreasing, and we are keenly aware that a prompt response is necessary to ensure skills succession.

Takashima: Are there any companies within the prefecture that use wood as biomass fuel?

Yoshimitsu: I think that there is only one company where wood is used for combustion together with coal and other fuels.

Azuma: From the perspective of companies, inability to obtain a stable supply of biomass is a problem. I suppose that some companies would install mixed combustion facilities if they could obtain a stable supply, as is the case with waste tires.

Yoshimitsu: In addition to that, it costs money to process thinned wood into chips and pellets.

Tsunoda: It may be necessary to first collaborate with companies to calculate what sort of system would be viable, and at what cost. Since there are companies located near forest

[Outside Participants]

- 1. **Ms. Kimie Tsunoda**
Steering Committee of the Valdez Society
- 2. **Mr. Akifumi Ueda**
Representative Citizens' Science Initiative Japan
- 3. **Mr. Shigeaki Yoshimitsu**
Counselor of Yamaguchi Chuo Forest Owner's Association



[Participants from Kyowa Hakko Kirin Group]

- 4. **Yoichi Tanaka**
General Manager
Administration Department
Kyowa Hakko Bio Yamaguchi Production Center
- 5. **Noriyuki Takashima**
Senior Manager
Environment and Safety
Kyowa Hakko Bio Yamaguchi Production Center Ube
- 6. **Kouichi Asou**
Senior Manager
Environment and Safety
Kyowa Hakko Bio Yamaguchi Production Center Hofu
- 7. **Masaki Azuma**
Director
Corporate Quality Assurance, Environment and Safety Department Kyowa Hakko Kirin

land that install combustion facilities, I think the situation is changing little by little.

Ueda: There is a case study involving farmland that I found interesting. A company that owns condominiums and an NPO collaboratively planned and implemented a project in which residents of condominiums built near abandoned farmland work together to once again bring the land under cultivation. I hear that the opportunity to participate together brings condominium residents closer to each other. The happy result is that the participants look forward to outings together, and land reclamation proceeds rapidly.

Tanaka: That creates added value, doesn't it?

Ueda: Even if a company acquires forestland and devises a means of land utilization, I think there's a limit to what a single company can accomplish. Wouldn't it be better if several companies, NPOs, or other organizations joined together? Also, isn't some sort of support from the central government necessary for forest management and personnel development?

Tsunoda: I think that interaction among companies and organizations is a way to get things done fast, since there are things that can be accomplished through agreement among these institutions alone. Then, if an NGO that engages in conservation activities joins in and a framework for participation together with the local forest owner's association can be put in place, activities on an even larger scale may be possible.

Proposal for a Forest Club

Yoshimitsu: In our river basin area, we have something called community forest volunteers, people who engage in activities to manage mountains themselves. These volunteers, former Kyowa Hakko Bio employees among them, engage in ongoing forest management activities. Although the forest owner's association also maintains organized work crews, we feel the need to manage the mountains on a larger scale on an ongoing basis.

Tsunoda: I have heard that in Shikoku a company has formed a forest club. It seems that some company employees who have family or relatives among members of the forest owner's association began going to the forest to trim trees on their days off, and the activity reached the point of formation of a club. Since the use of such intermediaries entails benefits such as the facilitation of corporate participation in forest conservation activities and opportunities for forest owner's association members to

interact with companies on a regular basis, it no doubt enables both sides to expand the scope of their activities. As a first step, why not form an organization like a forest club within the Kyowa Hakko Kirin Group?

Tanaka: Expansion of initiatives such as the one mentioned by Mr. Yoshimitsu through former employees who already engage in activities such as forest conservation might be effective if Kyowa Hakko Kirin can obtain information from former employees in various areas of Japan.

Ueda: I think that now it is possible for companies to found NPOs and organize people to support forest conservation rather than act independently. Since the Kyowa Hakko Kirin Group's business is biotechnology, one idea of possible interest would be to set forth a vision for the future regarding the utilization of wood chips. The importance of forests is recognized from the perspective of water resources as well. I think that the public response will be tremendous if Kyowa Hakko Kirin, in its interaction with various stakeholders, considers its corporate activities and the future of forests together and embarks on a course of developing forward-looking projects.

Tsunoda: I think that if Kyowa Hakko Kirin can cooperate with companies in river basin areas and involve universities, schools, and other learning centers, it should be able to find ways of greatly expanding its activities. Forest management and bio-fuels contribute to the conservation of forests and the prevention of Seto Inland Sea pollution. If people can view this kind of natural circulation from a scientific perspective, they will more readily understand the expansion of company-led activities.

Asou: For instance, I think that the availability of a mechanism for expressing forest conservation activities on a CO₂ equivalent basis developed through collaboration among companies, universities and government would make possible discussion and facilitate activities at the Ube Network for Climate Change Actions, an organization in which many companies, a university and a community forest association participate. A scientific explanation that expression of forest volunteer activities on a CO₂ equivalent basis has a corresponding impact on cash flow would be persuasive.

Azuma: I think that if there were a framework in Japan that permitted counting forest management activities as CO₂ offsets and recording them in environmental reports, this would become a major impetus for activities to protect forests at business sites.

Third-party Assessment (Viewpoint)

Itaru Yasui, Ph.D.

Professor Emeritus, The University of Tokyo
Vice Rector Emeritus, United Nations University



An expert in materials chemistry, Dr. Itaru Yasui has been implementing major environmental research projects for the past 15 years and is an important opinion leader in this area. He is concerned that there have been no comprehensive environmental research projects to meet today's need for research data based on intelligent insights. In line with his view that appropriate policy decisions must be based on a comprehensive viewpoint, he is currently implementing his own Internet-based campaign asking people to consider the extent to which an individual can achieve comprehensiveness.

<http://www.yasuienv.net>
(Japanese only)

When I chat with people from the media or NPOs, I'm surprised at how many feel that the state of the environment is worsening year by year. I mention that the current state of health of the Japanese people is without question at an all-time high and that this pinnacle may never be reached again. I explain about the history of environmental improvement since around 1970, about problems such as waste, dioxin and environmental hormones, and about the future environmental impact of climate change. Hearing this, people appear momentarily puzzled, but after a time the meaning dawns on them.

An image that the chemical industry and transportation are the main causes of pollution remains firmly entrenched among middle-aged and older people. Also, it seems likely that this image is prevalent among young people because they use what they learn in junior and senior high school social studies as their only judgment criterion. In fact, we have reached the point where chemical companies have already made what efforts they can to improve the natural environment.

That a shift in focus from pollution to other environmental activities has occurred is indicated by the topic taken up in this year's stakeholder meeting: what companies can do with regard to the interaction among forests, rivers and the sea. However, the general public has no opportunity to obtain knowledge about current developments that will change attitudes formed from memories of the past. For this reason, changes for the better do not become common knowledge throughout society, and people make judgments based on conventional stereotypes. This is regrettable.

However, it's pointless to complain. It seems to me the only course of action is to persevere in our efforts without making a fuss. It is my hope that Kyowa Hakko Kirin will continue to communicate the current state of its environmental activities in an easy-to-understand manner in this report. At the same time, the company should actively seek change on the part of the national government and other entities. Reducing carbon dioxide, a cause of climate change, is a difficult undertaking. The best countermeasures will likely involve the effective utilization of carbon dioxide as a raw material.

A graph on Page 28 of this year's report indicates that carbon dioxide generated in the combustion of 180,000 kiloliters of fossil fuel is used as a raw material in the oxo process, a method of increasing the length of one carbon chain in a CO₂ molecule, resulting in a reduction of 120,000 tons in emissions. With regard to products, the oxo process is used to synthesize fatty acids such as isononanoic acid, which is used as lubricant oil for freezers that use the chlorofluorocarbon substitutes mentioned on page 22.

I believe that this is truly the best means of utilizing CO₂. However, it appears to me that the carbon dioxide effectively utilized in this way has not been subtracted from the emissions performance figures. Could it be that this CO₂ utilization method wasn't considered when the law was made? I would like to see the company actively lobby the government in this regard.

Sustainability Report 2009
Third-Party Verification—Written Opinion

September 11, 2009



レスポンシブル・ケア

Dr. Yuzuru Matsuda
 President and Chief Executive Officer
 Kyowa Hakko Kirin Co., Ltd.

Akio Yamamoto
 Chairman, Verification Advisory Committee

Saburo Nakata
 Chief Director, Responsible Care Verification Center

● Objectives of Verification

This Responsible Care Report Verification refers to Sustainability Report 2009, which was prepared by Kyowa Hakko Kirin Co., Ltd. (hereafter the "report"). It expresses the opinion of the Responsible Care Verification Center as a chemical industry specialist on the following matters.

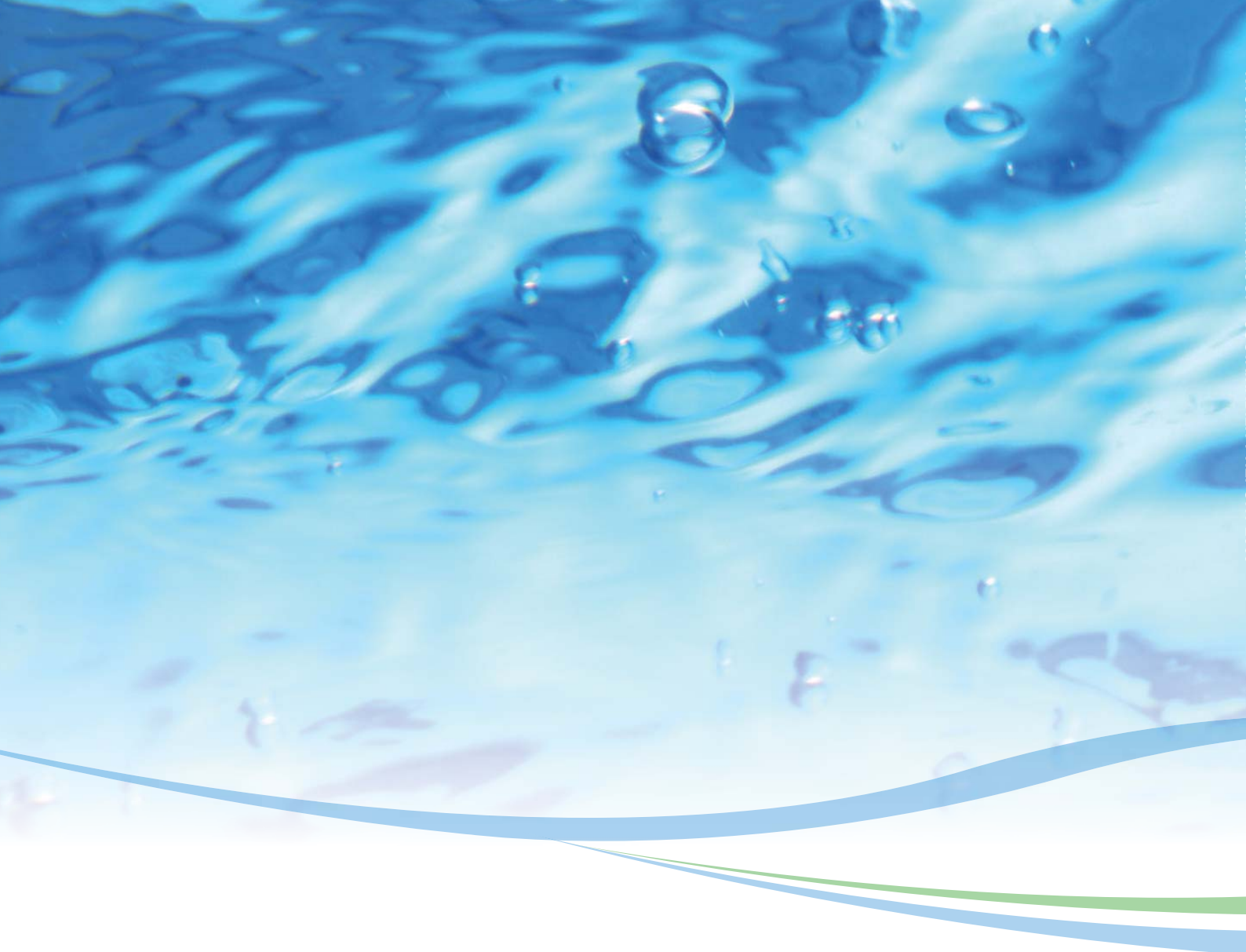
- 1) The reasonableness of methods used to calculate and aggregate performance indicators (numerical data) and the accuracy of numerical data
- 2) The accuracy of non-numerical information in the report
- 3) Details of Responsible Care activities
- 4) Characteristics of the report

● Verification Procedures

- At the corporate level: The reasonableness of the method used to aggregate performance indicators reported from each site (office, plant) and the accuracy of non-numerical information in the report were examined. The examination entailed interviewing those responsible for operations and preparation of the report and obtaining documents and explanations thereof from them.
- At the site level: The reasonableness of the methods used to calculate the numerical data reported to the head office, the accuracy of the numerical data, and the accuracy of non-numerical information in the report were examined. The site examination entailed interviewing those responsible for operations and preparation of the report, obtaining documents and explanations of those documents, and crosschecking against evidential documents and materials.
- Numerical data and information in the report were verified by sampling.

● Opinion

- 1) The reasonableness of methods used to calculate and aggregate performance indicators (numerical data) and the accuracy of numerical data
 - Numerical data were calculated and aggregated reasonably by the head office and the Takasaki Plant.
 - Performance indicators were calculated and aggregated accurately across the scope of the survey.
 - Room for partial improvement in the aggregation method used at the Takasaki plant was pointed out, and the method was adjusted for the present report.
- 2) Accuracy of the information in the report
 - The accuracy of the information in the report was confirmed.
 - Although the existence of issues with the appropriateness of expressions or ease of understanding was pointed out at the draft stage, these have been corrected in the present report.
- 3) Details of Responsible Care activities
 - We were impressed that Kyowa Hakko Kirin has made steady group-wide improvements in CO₂ emissions, atmospheric emissions of chemical substances, water pollution prevention measures, industrial waste final disposal volume and waste recycling volume in Eco-project activities continuously implemented since 1998.
 - We were impressed that Kyowa Hakko Kirin has obtained ISO 14001 combined certification at eight business sites.
 - We were impressed that the Takasaki Plant has achieved an ongoing record of zero accidents resulting in lost work time for 20 years since 1989.
 - We were impressed that the forest conservation activities begun by Kirin Brewery in 1999 are activities that recognize that water is an important environmental issue and are being continued at the Kyowa Hakko Kirin Takasaki Plant and Fuji Plant.
 - We were impressed that the laboratories and the Fuji Plant have for many years conducted science experiment classes at elementary schools and junior high schools.
- 4) Characteristics of the report
 - This is the second report issued by the Kyowa Hakko Kirin Group, and reporting on CSR activities has been enhanced.
 - A Management Commitment section is included at the beginning of the report, which indicates that executive management takes the initiative in the implementation of CSR activities. A stakeholder meeting is held each year, and the opinions of host community residents are reflected in improvement in CSR activities.



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