The English edition of the Kyowa Hakko Kirin Group Sustainability Report is distributed online only.
Kyowa Hakko Kirin Group Sustainability Report 2008 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.

Special Features–1
Kyowa Hakko Kirin opens up the future of therapeutic antibodies.

Special Features–2
How Kyowa Hakko Kirin’s MR* activities enhance patient satisfaction.

Special Features–3
Introducing L-citrulline, a new food ingredient with a range of health benefits.

Corporate Governance
Kyowa Hakko Kirin’s fundamental approach to corporate governance.

Social Performance
A selection of highlights showing Kyowa Hakko Kirin’s emphasis on strong community relations.

Environmental Performance
A special feature on global warming prevention activities and results.

Editorial Policy
Kyowa Hakko Kirin Group was launched in October 2008 following the merger of Kyowa Hakko Kogyo and Kirin Pharma, and the Kyowa Hakko Kirin Group Sustainability Report 2008 is the first sustainability report issued by the new company. In the first half of the report, we cover the direction that the Kyowa Hakko Kirin Group will pursue in its future activities. In the second half we cover environmental and social performance, focusing on Kyowa Hakko Kirin companies Kyowa Hakko Kogyo Co., Ltd., Kyowa Hakko Chemical Co., Ltd., Kyowa Hakko Food Specialties Co., Ltd. and the domestic consolidated production subsidiaries listed on Page 5 as a rule. In this report we use company and business site names and job titles effective from October 1 onward; however, we use previous terminology in places, such as the Stakeholder Meeting section.

In July 2008, we held a stakeholder meeting at the Takasaki Plant with the aim of enhancing report concept development and content. We obtained third-party verification to improve the reliability of information contained in the report and also obtained the opinion of an expert in the field about the overall concept of the report, which we have included in the report.

In compiling this report, we referred to the Environmental Reporting Guideline of the Ministry of the Environment and the Responsible Care Code. From the viewpoint of corporate social responsibility (CSR), we have also included material concerning corporate governance, corporate ethics, interaction with society and communities, voluntary initiatives by employees and the social significance of our business operations.

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 (Pages 3, 4). Environmental load and social performance data were gathered from Kyowa Hakko Kirin Group production and R&D sites in Japan and production sites overseas (Biokogyo, Shanghai Kyowa Amino Acid, Wuxi Xiehe Food and Kyowa Foods (Liongyu), Green Office Plan data for sales sites in Japan have been integrated. To maintain continuity with past data, we have recorded separately the environmental activities of Daiichi Fine Chemical, which joined the Group on June 1, 2007, and have recorded only in the site data on Page 39 data for the Kirin Pharma Takasaki Plant, which became a consolidated subsidiary on April 1, 2008.

Period Reported
The periods covered by the report are fiscal 2007 (April 2007 to March 2008) for operations in Japan and calendar 2007 (January to December) for overseas operations. Data for fiscal 2008 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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Information Provision Activities by an Organization of 1,400 MRs
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*MR: Medical Representative
The Establishment of the Kyowa Hakko Kirin Group
October 1, 2008 marked the launch of Kyowa Hakko Kirin Co., Ltd., the result of a merger between Kyowa Hakko Kogyo Co., Ltd. and Kirin Pharma Company, Limited.

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.

Corporate Data

<table>
<thead>
<tr>
<th>Corporate Name</th>
<th>Kyowa Hakko Kirin Co., Ltd.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Established</td>
<td>October 1, 2008</td>
</tr>
<tr>
<td>Paid-in Capital</td>
<td>¥26,745 million</td>
</tr>
<tr>
<td>Representative</td>
<td>President and CEO: Yuzuru Matsuda</td>
</tr>
<tr>
<td>Head Office</td>
<td>1-6-1, Otemachi, Chiyoda-ku, Tokyo 100-8185, Japan</td>
</tr>
<tr>
<td>TEL:</td>
<td>+81-3-3282-0007</td>
</tr>
<tr>
<td>Number of Employees</td>
<td>7,917 (Consolidated), 3,707 (Non-consolidated)</td>
</tr>
</tbody>
</table>

Principal Consolidated Subsidiaries

- Pharmaceuticals
  - Manufacturing and sale of pharmaceuticals and clinical diagnostic reagents
  - Bio-Chemicals
    - Manufacturing and sale of pharmaceuticals and industrial-use raw materials, health care products, agrochemicals, products for livestock and fishery industries and alcohol
  - Chemicals
    - Manufacturing and sale of solvents, plasticizer raw materials and specialty chemicals
  - Food
    - Manufacturing and sale of seasonings, baking ingredients and products, such as premixes
  - Other
    - Wholesaling and transportation

Outside Japan

- Kyowa Hakko Kirin Co., Ltd.
  - Kirin Kajinui (China) Bio Pharmaceutical Co., Ltd. (Shanghai, China)
  - Kyowa Hakko Bio Co., Ltd.
  - BioKyowa Inc. (Mississauga, Canada)
  - Shanghai Kyowa Amino Acid Co., Ltd. (Shanghai, China)
  - Kyowa Hakko Food Specialties Co., Ltd.
  - Wuxi Wanki Food Co., Ltd. (Wuxi, China)
  - Kyowa Foods (Ibaraki Co., Ltd. (Japan), China)
  - Qingdao Kyowa Warts Foods Co., Ltd. (Qingdao, China)

- Other Consolidated Subsidiaries
  - Kyowa Medex Co., Ltd.
  - Daiichi Fine Chemical Co., Ltd.
  - Ohland Foods Co., Ltd.
  - Kyowa F. D. Foods Co., Ltd.

Business Bases

- Principal Laboratories
  - Kyowa Hakko Kirin Co., Ltd.
    - Fujiresearch Center (Fuji Plant/Shizuoka)
    - Tokyo Research Center (Takasaki, Gunma)
    - Technical Research Laboratories (Takasaki Plant/Gunma)
    - Drug Formulation Research and Development Laboratories (Fuji Plant/Shizuoka)
  - Kyowa Hakko Bio Co., Ltd.
    - Technical Research Laboratories (Yamaguchi Production Center/Takarazuka, Hyogo)
    - Drug Formulation Research and Development Laboratories (Takasaki Plant/Gunma)
  - Kyowa Hakko Chemical Co., Ltd.
    - Yokai Chemical Laboratories (Yokai Plant/Mie)
  - Kyowa Hakko Food Specialties Co., Ltd.
    - Food Creation Center (Takasaki Plant/Banana)
    - Research Laboratories (Fuji Plant/Shizuoka)

- Principal Sales Bases
  - Kirin Holdings Company, Limited
    - 50.10% subsidiary
  - Kyowa Hakko Kirin Co., Ltd.
    - Pharmaceutical
      - Hematech, Inc. (South Dakota, U.S.A.)
      - Kyowa Hakko U.K. Ltd. (Berkshire, U.K.)
      - Kirin Pharma USA, Inc. (California, U.S.A.)
      - BioWa, Inc. (New Jersey, U.S.A.)
      - Kyowa Pharmaceutical, Inc. (New Jersey, U.S.A.)
  - Bio-Chemicals
    - Kyowa Hakko Bio Co., Ltd.
      - Fujiresearch Center (Fuji Plant/Shizuoka)
      - Tokyo Research Center (Takasaki, Gunma)
      - Technical Research Laboratories (Takasaki Plant/Gunma)
      - Drug Formulation Research and Development Laboratories (Fuji Plant/Shizuoka)
    - Kyowa Hakko Chemical Co., Ltd.
      - Yokai Chemical Laboratories (Yokai Plant/Mie)
  - Food
    - Kyowa Hakko Food Specialties Co., Ltd.
      - Food Creation Center (Takasaki Plant/Banana)
      - Research Laboratories (Fuji Plant/Shizuoka)

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  - Kyowa Hakko Kirin Co., Ltd.
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    - Kyowa Hakko Bio Co., Ltd.
      - BioKyowa Inc. (Mississauga, Canada)
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  - Daiichi Fine Chemical Co., Ltd.
  - Ohland Foods Co., Ltd.
  - Kyowa F. D. Foods Co., Ltd.
A Message from the President

The Birth of the Kyowa Hakko Kirin Group

The Kyowa Hakko Kirin Group, launched on October 1, 2008, aims to be a Japan-based, world-class R&D-driven life sciences company focusing on pharmaceuticals with a firm foundation in biotechnology. In the Pharmaceuticals business, we aim to be a global specialty pharmaceutical company that focuses on therapeutic antibodies. In the non-pharmaceutical businesses, we aim to be a leading global player by pursuing business integration and alliances within the new organizational framework.

Today, we cannot expect conventional approaches of recent decades to guide us successfully through the unprecedented developments in our future. In Japan, birthrate decline and population aging are proceeding at the world’s fastest pace. Furthermore, as the global environment worsens, we see the beginnings of a world-wide scramble for resources, energy and food. Business conditions within our core Pharmaceuticals business are becoming increasingly challenging. We must recognize and face the true reality head-on to create a winning scenario for Group growth and development. Success or failure in the Pharmaceuticals business will hinge on our ability to consistently release new drugs and to establish a competitive presence overseas. We cannot survive unless we are truly a world-class company. Kyowa Hakko and Kirin Pharma have both voluntarily entered the tie-up that has become Kyowa Hakko Kirin. Both managements saw that by working as one, rather than independently, we would realize the potential to engage in aggressive, proactive business—gaining speed and resources to shape much of our own business environment rather than passively reacting to external changes made by others.

Aiming to Be a Leading Global Player

Around 1981, Kyowa Hakko was among the first companies to focus attention on monoclonal antibodies. By consistently pursuing research and development over many years, we have gained a globally advantageous position in therapeutic antibodies. Additionally, we have extended the leadership of our capabilities to produce highly active human antibodies, by combining Kirin Pharma’s KM Mouse® technology for efficiently creating fully human antibodies and Kyowa Hakko’s POTEIOLGENT® and COMPLEGENT™ technologies for producing highly active antibodies. A time when therapeutic antibodies are attracting attention around the world, our potential to become a global leader in this field can only increase. I aspire to overcome adversity and become a leading global player by firmly resolving to place importance on teamwork and the joint realization of a common dream.

In the Bio-Chemicals business, a Group flagship business closely connected with the Pharmaceuticals business, we maintain production bases in Japan, the U.S. and China and are aggressively pursuing global business development. The foundation of our global business activities is biotechnologies applied in amino acids for infusions, pharmaceutical raw materials and intermediates, and medical foods in addition to bulk pharmaceuticals. In the Food business, I am confident that the integration with Kirin Food-Tech, which is scheduled to occur in April 2009, will enable us to draw up a dynamic strategy to make the Food business the fourth mainstay business of the Kirin Group, with business activities that extend beyond Japan to Asia and Oceania. The very beginning of Kyowa Hakko was our entry into the Chemicals business with the production of acetone and butanol by fermentation. In the coming years we will engage in a business that truly meets the needs of the times, producing chemical products that address global environmental problems that command worldwide attention.

A Company Is a Public Institution

With regard to the Kyowa Hakko Kirin Group’s CSR activities, our business activities themselves are tightly incorporated within the social framework for the benefit of society. For instance, in the Pharmaceuticals business, our mission is to ease suffering from illness and to contribute to the health and well-being of people of the world over. Our most important considerations in production activities, regardless of our business area, are the protection of the local environment, protection of employees and harmonious coexistence with local communities.

It is worth repeating here that the Kyowa Hakko Kirin Group will aim for highly transparent, fair and speedy management. We intend to place importance on our employees, while meeting shareholder expectations as a company that benefits society. I would like to ask for your understanding and cooperation in getting the new company off to a favorable start.

October 2008

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

Kyowa Hakko Kirin Group
Numerical Targets in the Fiscal 2008–2010 Medium-Term Business Plan

<table>
<thead>
<tr>
<th>Consolidated Net Sales</th>
<th>Pharma</th>
<th>Bio-Chemicals</th>
<th>Chemicals</th>
<th>Food</th>
<th>Other</th>
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<tr>
<td>FY 2008</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
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<tr>
<td>FY 2009</td>
<td>0</td>
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<tr>
<td>FY 2010</td>
<td>0</td>
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<td>20</td>
<td>30</td>
<td>0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Income</th>
<th>Pharma</th>
<th>Bio-Chemicals</th>
<th>Chemicals</th>
<th>Food</th>
<th>Other</th>
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<tbody>
<tr>
<td>FY 2008</td>
<td>50</td>
<td>40</td>
<td>30</td>
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</tr>
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<td>50</td>
<td>40</td>
<td>30</td>
<td>20</td>
<td>10</td>
</tr>
</tbody>
</table>
At Kyowa Hakko, we have focused on the importance of sugar chains in therapeutic antibodies and engaged in the development and practical application of technology to control the fucose within sugar chains. Through these activities we have learned that current therapeutic antibodies are unable to demonstrate their maximum activity, as they are fucose-modified. Dramatically higher cytotoxicity action has been confirmed in Phase I clinical trials of KW-0761 and BIW-8405, therapeutic antibodies created using POTELLIGENT® technology, an antibody sugar chain fucose-control technology. POTELLIGENT® technology has also been out-licensed to major pharmaceuticals companies and biotechnology companies in Japan and overseas (including Genentech, Biogen Idec, MedImmune, Medarex, GlaxoSmithKline, UCB, Takeda Pharmaceutical and Novartis) for use in the development of next-generation therapeutic antibodies.

In addition to POTELLIGENT® technology, which enhances antibody-dependent cellular cytotoxicity (ADCC), we have succeeded in the development of COMPLEGENT™ technology, which enhances complement-dependent cytotoxicity (CDC), another pharmacological activity important in therapeutic antibody efficacy expression. Kyowa Hakko’s integration with Kirin Pharma will make possible the application of these technologies to drug development using mouse-related technologies for producing human antibodies. We aim to continue to utilize these technologies to deliver to patients even more therapeutic antibodies with higher therapeutic effect.

At Kirin Pharma, we have engaged in the research and development of therapeutic antibodies, cell therapies and low-molecular-weight drugs. We succeeded in developing the KM Mouse® technology for producing fully human antibodies, and this technology supports the creation of therapeutic antibodies. This world-class human antibody-producing mouse technology resulted from the fusion of Kirin Pharma’s proprietary method of infusing large human antibody genes into mice with technology from Medarex of the U.S. We use this technology in the in-house development of therapeutic antibodies and also extensively provide it to pharmaceuticals companies and venture companies around the world. Advances in genome science, such as the mapping of all sequences of the human genome, have broadened the target for therapeutic antibodies, and the market for human therapeutic antibodies is expected to greatly expand in the coming years.

Through the strategic alliance with Kyowa Hakko, we expect to increase our drug discovery capabilities and presence in the therapeutic antibody sector and expand opportunities for new antigen acquisition by fusing the antibody technologies of the two companies. We aim to efficiently create new drugs by taking maximum advantage of alliance synergy.

Dr. Mitsuo Sato
Director, Antibody Research Laboratories, Pharmaceutical Research Center, Kyowa Hakko

Isao Ishida, Ph.D.
General Manager, Frontier Laboratory, Kirin Pharma

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At the Fukushima No. 1 Sales Office, nine MRs cover hospitals in Fukushima Prefecture. Although the prefecture is divided into seven medical service areas, we focus MR activities on heavily populated Koriyama City, Fukushima City, Aizuwakamatsu City and Iwaki City areas, where there are many cancer-care hospitals and major hospitals that treat acute-stage illnesses. As the prefecture is geographically large, the MRs often travel for two hours or longer to visit hospitals distant from the sales office.

The role of MRs is to accurately communicate to physicians information on drugs developed in-house and ensure the satisfaction of many patients and physicians through the effective use of the products. A number of factors have made the current business conditions in the hospital market extremely adverse for us. They include visit restrictions, fewer staff physicians, as physicians go into private practice, and the elimination of departments at hospitals in areas with declining populations. Nevertheless, the team is working with a positive attitude and high motivation.

When engaged in MR activities, there are always opportunities to strengthen relationships of trust with physicians. We will seize these opportunities and focus on engaging in speed-oriented MR activities, doing our utmost to contribute to community medicine by increasing patient satisfaction.

Increasing Patient Satisfaction and Contributing to Better Medicine throughout the Community

Yoshimasa Togawa
General Manager, Fukushima No. 1 Sales Office, Tohoku Branch, Kyowa Hakko Kirin

At the Fukushima No. 1 Sales Office, nine MRs cover hospitals in Fukushima Prefecture. Although the prefecture is divided into seven medical service areas, we focus MR activities on highly populated Koriyama City, Fukushima City, Aizuwakamatsu City and Iwaki City areas, where there are many cancer-care hospitals and major hospitals that treat acute-stage illnesses. As the prefecture is geographically large, the MRs often travel for two hours or longer to visit hospitals distant from the sales office.

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Expectations for Health Improvement through the Supply of New Materials

Miho Kizaki
Healthcare Products Development Center, Kyowa Hakko Bio

Citrulline is a free amino acid found in our bodies. It was discovered in watermelon juice by a Japanese researcher in 1930 and is known to be contained in watermelon in large quantities. Within the body, citrulline is involved in the production of nitrogen monoxide (NO) and functions to improve the body’s circulation by, among other things, promoting vascular enlargement and blood flow promotion. Through the improvement of circulation, citrulline promotes metabolism and is expected to provide improvements for contemporary lifestyle-related health issues, including reduced chilling of the extremities, skin improvement and the maintenance of blood vessel health.

Citrulline was sold in the U.S. as a sports supplement, even before its use as a food ingredient became possible in Japan. In Europe, citrulline malate has been sold for more than 30 years as an OTC drug available without a prescription at ordinary pharmacies and drugstores. Japan’s first health food product to contain citrulline went on sale in October 2007, and citrulline is expected to contribute to maintaining the health of countless people as a food ingredient in the years to come.
Corporate Governance

The Basic Approach to Corporate Governance

In October 2007, Kyowa Hakko entered into a strategic alliance with Kirin Group, and in October 2008 merged with Kirin Pharma to launch Kyowa Hakko Kirin. We have established the management organization and structures and are implementing the measures needed to realize the Kyowa Hakko Kirin vision of creating a “Japan-based, leading world-class Japanese research and development-centered life sciences company focusing on pharmacuticals with a firm foundation in biotechnology.” We recognize that increasing the transparency of management and strengthening management supervision are important for continuously increasing corporate value and work to enhance corporate governance.

Kyowa Hakko Kirin operates with autonomy and flexibility, while respecting the basic group policy of Kirin Holdings, and maintains management independence as a listed company and strives to maximize shareholder interests and expand corporate value.

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 October 1, 2008). 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.

Managing Risk through In-house Committees

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

- **Group Risk Management Committee**: Deliberates on measures to implement group-wide risk management to identify potential management risks; assess risks from a group-wide perspective and implements a risk response.
- **Group Corporate Ethics Committee**: Ensures and promotes legal and ethical behavior in order to earn the confidence of the general public; formulates ethical codes of conduct for employees; focuses on the soundness and appropriateness of the corporate activities.
- **Group Environment and Safety Committee**: One of the President’s advisory groups, debates basic policies relating to environmental protection and safety.
- **Group Quality Assurance Committee**: One of the President’s advisory groups, focuses on basic quality assurance policies.
- **Information Disclosure Committee**: Deliberates on important matters relating to basic information policies and information disclosure.
- **Financial Management Committee**: Focuses on the efficiency of financing activities and discusses finance-related risks.
- **Information Security Committee**: Discusses basic policies relating to the protection and handling of confidential information.

Basic Policy and Implementation Structure

The Kyowa Hakko Kirin Group regards compliance as a top management priority and strives to ensure corporate ethics and promote awareness of corporate social responsibility through the development of a strong compliance system supported by education and awareness activities. The Group Corporate Ethics Committee has played a central role in the formulation of rules for employees, such as the codes of ethical conduct, and the establishment of the Ethics Hotline, an internal compliance-related reporting system. The Company has also established the Corporate Ethics Group Legal Department, a dedicated organization whose role is to ensure the observance of corporate ethics and compliance throughout the Group in Japan. The structure for promoting corporate ethics is shown below.

Establishment and Operation of a Hotline

The Ethics Hotline is a system available for use not only by corporate officers and employees, but also by occasional employees, part-time workers and temporary staff of Kyowa Hakko Kirin Group in Japan. It was launched as a system to resolve problems immediately through direct reporting to the Director of Ethics, if someone in the office is discovered to be behaving or planning to behave against the law. The system is being improved, with establishment of channels for reporting to outside advisors and the Corporate Ethics Group Legal Department and expansion of the methods of reporting.

We also strive to create an office environment that encourages hotline use by putting up posters about the system and distributing a wallet card listing appropriate contact information for all members who use the system.

Corporate Governance Organization

Corporate Ethics and Compliance

Education and Awareness Activities

We emphasize education and awareness activities to ensure that all employees, including corporate officers, recognize the importance of corporate ethics and acquire correct knowledge about ethics. We engage in the following cornerstone education and awareness activities once each year.

- **Corporate ethics lectures**: We hold lectures for corporate officers, business site directors, general managers and those who volunteer to help with audits. Depending on the specific topic, these lectures are conducted by attorneys, university professors or other outside instructors. The lectures are recorded on DVD and shown at gatherings held at individual business sites.
- **Corporate ethics briefing sessions**: We hold briefing sessions for all corporate officers and employees as part of the collective instruction conducted at individual business sites. The Corporate Ethics Group Legal Department conducts the briefings, and the topic changes each year.
- **E-learning instruction**: We provide ethical instruction centered on case studies for officers and employees, and 4,660 employees participated in fiscal 2007. Once a year, we use the e-learning system to conduct an ethics check (a monitoring activity) by which all officers and employees review their own day-to-day behavior.
Corporate Governance

Quality and Safety of Pharmaceuticals

The Mission of the Pharmacovigilance and Quality Assurance Division

The Pharmacovigilance and Quality Assurance Division plays an important role with respect to our reliability as a pharmaceutical company, being responsible for the provision of customer safety and peace of mind. The division is in charge of research and development application dossier reliability assurance, quality assurance for pharmaceuticals produced at the plants, and post-marketing safety management and quality management in accordance with Good Vigilance Practice (GVP) and Good Quality Practice (GQP) standards. Violation of the Pharmaceutical Affairs Law results in business license revocation or the partial or complete suspension of business.

Kyowa Hakko Kirin strives to ensure pharmaceutical quality and safety on the basis of close collaboration among departments in accordance with the framework in the chart below.

Pharmaceutical Quality and Safety Assurance

Pharmaceutical companies that sell pharmaceuticals are required under the Pharmaceutical Affairs Law to employ a marketing supervisor-general and to appropriately practice post-marketing safety management and quality management in accordance with Good Vigilance Practice (GVP) and Good Quality Practice (GQP) standards. Violation of the Pharmaceutical Affairs Law results in business license revocation or the partial or complete suspension of business.

Kyowa Hakko Kirin strives to ensure pharmaceutical quality and safety on the basis of close collaboration among departments in accordance with the framework in the chart below.

Group Quality Assurance

The Kyowa Hakko Kirin Group consists of four business fields—Pharmaceuticals, Bio-Chemicals, Chemicals and Food. We maintain a triple-check system to confirm that quality assurance systems function properly by maintaining quality assurance units at each manufacturing site (plant), quality assurance units for each business field and the Corporate Quality Assurance, Environment and Safety Department, which provides group-wide audit support.

Pharmaceutical Quality Assurance

Pharmaceutical companies that sell pharmaceuticals are required under the Pharmaceutical Affairs Law to employ a marketing supervisor-general and to appropriately practice post-marketing safety management and quality management in accordance with Good Vigilance Practice (GVP) and Good Quality Practice (GQP) standards. Violation of the Pharmaceutical Affairs Law results in business license revocation or the partial or complete suspension of business.

Kyowa Hakko Kirin strives to ensure pharmaceutical quality and safety on the basis of close collaboration among departments in accordance with the framework in the chart below.

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.

Relations with Business Partners

“Green Procurement Guidelines”

In August 2008, we reviewed the green procurement guidelines that apply to business partners from which Kyowa Hakko Kirin procures raw materials, parts, office supplies, equipment, fixtures, facilities and other items. In the review, we placed importance on the eco-friendliness of products. In addition to previous environmental management activities assessment items, we added to the purchased goods eco-friendliness items, concern about energy conservation and resource conservation, the use of recycled materials and materials containing a high proportion of recycled products, and the use of materials that simplify waste processing and disposal and facilitate recycling.
Employee Relations (Kyowa Hakko)

Employee Training

In fiscal 2007, Kyowa Hakko aimed to achieve a corporate culture characterized by solutions and speed, autonomy of businesses and individuals, outgoingness and openness and devotes considerable effort to human resource development. Employee training is broadly divided into rank-based training, upper management training and support for employee upskilling. There are also numerous programs specific to individual business operations, including business upskilling courses. Kyowa Hakko Kirin regards human resource development as a key management priority and will continue to enhance and strengthen programs in this area.

Award System

Kyowa Hakko presented a variety of awards, including the President’s Awards and awards for inventions, in recognition of especially meritorious achievement by employees in fiscal 2007. Employees who have made significant contributions in the areas of the environment, safety or quality are also recognized under this system.

Childcare Support Measures

Out of desire to provide childcare support for employees, Kyowa Hakko has prepared the following programs jointly with the labor union for study and sequential implementation.

- Enhancement of the system providing reduced working hours for childcare (implemented in 2007)
- Active publicizing of internal systems, information provision and development of a consultation system (implemented in 2007)
- Assistance for childcare service expenditures (implemented in 2008)
- Extension of the childcare leave application period (implemented in 2008)
- Introduction of follow-up tools for employees who take childcare leave (implementation planned for 2008)

Employment of Workers with Disabilities

Kyowa Hakko’s rate of employment of people with disabilities was 2.6% in June 2007, exceeding the 1.8% standard in the Law for Employment Promotion, etc. of Persons with Disabilities. Kyowa Hakko employed 85 disabled people (as of March 2008; one person with severe disabilities is counted as two persons employed) and it planned 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.

Labor-management Communication

In fiscal 2007, both management and labor recognized the importance of communication as the basis of labor-management relations in Kyowa Hakko, and there was a shared commitment to problem solving through proper consultation. The key forums for labor-management communication were the Management and Union Communication Councils at central and site levels, which served discussion of issues relating to corporate management and operational policies. The forum for consultation on salaries and working conditions was the Remuneration Committee.

Mental Health Initiatives

Since 2007, on the basis of the General Outline for Measures to Create Lively Workplaces, which focuses on mental health, Kyowa Hakko implemented comprehensive measures based on four types of mental health care: self-care, care provided by line managers, care provided by industrial physicians and healthcare staff and care utilizing external resources. For the maintenance and promotion of mental health, it implemented line-care training and self-care training, and conducted stress diagnosis for all employees and provided feedback to enable individual employees to implement stress countermeasures. As of April 1, 2008, 35 employees have obtained industrial counselor qualifications and act as mental health promoters in workplaces.

Mental Health Self-care Promotion Activities

At the head office, we have conducted 16 self-care explanation sessions with the aim of preventing mental disorders. The subject matter of the sessions focuses on how to maintain mental health, just as they do their physical health, and that each individual proactively discovers methods of maintaining mental health.

Participants at the explanation sessions filled out a questionnaire and offered various opinions, including “I wish you had conducted this explanation session earlier,” “I was surprised at the courtesiness of the company’s support structure,” and “I would like more in-depth training.” We plan to reflect these opinions in upcoming line-care training and self-care training.

Let’s work together to create workplaces where everyone can work in excellent physical and mental health.
Occupational Safety and Health (Kyowa Hakko)

Traffic Safety
Kyowa Hakko and Kyowa Hakko Food Specialties used 1,153 commercial vehicles (as of March 2008), and the sales offices engaged in traffic safety activities based on a group-wide traffic safety policy. In fiscal 2007, there were 129 at-fault accidents (including accidents at parking areas), a slight increase from the previous year.

With respect to the environment, they have renewed their target of using 100% low-emission company-owned commercial vehicles in 2010. In fiscal 2007, nearly all company-owned vehicles were low-emission vehicles (certified low-emission vehicles), and 92% of all commercial vehicles, including leased private cars, were low-emission vehicles.

Aiming for Zero Accident and Disaster Status
To prevent fire and explosion accidents, the Kyowa Hakko Group engaged in activities centered on risk assessment. To prevent against disaster, each workplace put in place a disaster preparedness system to minimize damage and periodically conducted disaster preparedness drills.

Disaster Preparedness Drill (Tokyo Research Park)
During Hazardous Materials Safety Week in June 2007, Tokyo Research Park conducted a fire drill jointly with a fire brigade of the Machida Fire Department that involved the use of an organic solvent. In the drill, the sounding of an emergency bell was followed by an official announcement by the laboratory fire brigade, notification of the fire department, initial fire-fighting using indoor fire extinguishers and hoses handled by fire hydrant team members. Following the arrival of the municipal firefighters, the drill simulated rescue by ladder truck of staff members who had inhaled smoke and were trapped on the roof. They then received assistance from ambulance attendants. Following the rescue team drill, the laboratory fire hydrant team participated in a drill involving hosing of a rooftop billboard with water.

Measures to Prepare for a Major Earthquake
The Kyowa Hakko Group has long been determined to fulfill 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 made preparations that included the dispersal of production and distribution operations and the earthquake-proofing of buildings. As part of risk management in preparation for an earthquake deep below Tokai, Tonankai, or the Tokyo metropolitan area, it installed satellite telephones at all business sites, including sales offices, and engaged in monthly drills. Furthermore, in 2007, it introduced a safety confirmation system at the head office and commenced operation for employees and their families in case of an earthquake emergency. Kyowa Hakko Kirin is now in the process of introducing the system at the laboratories and sales offices.

Earthquake Preparedness Drill (Fuji Plant)
In preparation for an earthquake in the Tokai region, each November the Fuji Plant conducts a disaster preparedness drill. In fiscal 2007, the plant conducted training for building emergency risk assessors, who examine the state of buildings following an earthquake, and a drill involving examination of building deformation or cracking, internal wall cracking, ceiling deformation, abnormal noise and other items. In the drill, after building emergency risk assessment the disaster preparedness team headquarters relocated inside a building, and the disaster preparedness team indicated the positions of the disaster site, the plant fire brigade, the headquarters of various teams and the secondary evacuation area on a map of the grounds and ascertained the status of the disaster. The plant plans to continue to conduct practical drills appropriate to specific emergency situations.

Distribution Safety
The Kyowa Hakko Group maintained a 24-hour emergency response system in fiscal 2007 to rapidly deal with emergencies during the transportation of chemicals and alcohol. It followed the Yellow Card and Container Yellow Card systems and thoroughly instructed distribution and transportation workers in disaster response methods. There were no distribution-related accidents during fiscal 2007.
Community Relations (Kyowa Hakko)

Responsible Care (RC) Community Dialog

Every second year, the Sakai Plant, jointly with six Sakai-Sentou area member companies, holds a Responsible Care Community Dialog meeting in the Sakai-Sentou District. The sixth dialog meeting, held at the Mitsui Chemicals Inc. Osaka Plant, drew about 80 participants, including representatives from residents’ associations, local schools and public administrations. A plant tour and explanations by member companies of their environmental activities were followed by questions from area residents concerning the response to odors and other environmental concerns, chemical plant safety and plant tours, as well as individual company presentations about their local environmental and security activities.

Science Experiment Classes

The Fuji Plant conducts science experiment classes during spring and summer school breaks in which researchers serve as instructors who guide local upper-grade elementary school and junior high school students as they experience the joy and fun of science experiments. In fiscal 2007, the students observed onion cells and their own cells under microscopes and made artificial “slime.” After receiving Fuji Plant Science Expert Certificates upon completion of the class, the delighted children invited the instructors to return the following year.

The Bio-adventure Mobile Laboratory

Since 2000, the BioFrontier Laboratories have operated a program to “deliver” science experiment classes using the Bio-adventure Mobile Laboratory, a dedicated vehicle filled with a variety of experimental equipment. In fiscal 2007, the mobile laboratory visited five schools and facilities to conduct classes that featured hands-on learning activities, such as microscopic observation of microorganisms, DNA detection and an immune reaction experiment involving coloration. Experimental classes were also conducted for the children of employees.

The Kato Memorial Bioscience Foundation

In fulfillment of the desire of Kyowa Hakko founder Dr. Benzaburo Kato to promote the advancement of science and technology, The Kato Memorial Bioscience Foundation provides in wide-ranging research support for young researchers who aim to create, pioneering research in the field of bioscience. In fiscal 2007, the foundation supported 28 research projects.

Nippon Keidanren 1% Club

Kyowa Hakko Kirin continues to participate in the activities of the Nippon Keidanren 1% Club, a group established by the Nippon Keidanren (the Japan Federation of Economic Organizations) for companies that devote at least 1% of their ordinary income to fund social contribution activities. We made donations through the Japan Red Cross Society to support relief activities for victims of the Myanmar cyclone and Sichuan earthquake of May 2008. The Beijing Representative Office and Kyowa Hakko (H.K.) Co., Ltd. also provided assistance at the time of the Sichuan earthquake.

Distribution of Braille Calendars

Each year since 1994, Kyowa Hakko has 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 2008 edition of the calendar, which featured twelve types of living creatures found in and around the home, to 71 schools across Japan.

Expectations for Forest Conservation Activities

Azuma: Last year, employees and their families began forest conservation activities to maintain the area surrounding headwaters above the Kirin Pharma Takasaki Plant. Mr. Hamaoka, you actually participated in the activities. What were your lasting impressions?

Hamaoka: One of the initial aims is to enable employees to bring their families to events and enjoy the forest. Without this kind of opportunity, I would never have known that thinning the forest actually makes the trees grow larger and stronger. The important thing is how to continue the forest conservation activities over time, and I think we must devise various means to ensure continuation. In that regard, the integration with Kyowa Hakko has brought new people into the activity, and I look forward to cooperating with our new colleagues.

Yura: In some instances, forest conservation as a corporate social responsibility activity can be considered less than a top-priority matter, if it is not connected to the actual business of the company in question. However, this forest conservation project is a CSR theme closely linked to Kyowa Hakko Kirin’s corporate activities. From the perspective of continuity, it is similar to a business activity, in that you decide goals and make plans to achieve them, isn’t it? I hear that the forest conservation activities will take place over three and a half years. I believe that plans and goals made as specific as possible using numerical targets make activities easy to understand for participants and observers alike.

Tsunoda: I suppose that in this activity you consider only upstream areas. The fact is, maintaining well-managed mountains in upstream areas is an activity that will also contribute to mitigation of flood hazards. Preservation of the water environment can also be reconsidered from the perspective that the river flows into the Karasu River, Tone River and Tokyo Bay. Although, in some cases, ratings from assessment organizations are reduced when social contribution activities are not connected to a company’s main business, when we consider which activities truly contribute to society I think that, in fact, this is a highly meaningful activity.
Ichihashi: As an organizer of the forest conservation activities, I have mixed emotions, such as concern about possible injury to participants when tools are used, or what to do if the weather is bad. Nevertheless, I want to steadily engage in activities for three and a half years. As environmental systems spiral up through the implementation of a PDCA cycle, I think that continuing with activities is the most important thing. Continuity of activities is one benchmark for evaluation, and I think that whether or not the number of participants and the area covered expand are also good points for evaluation.

Ueda: Although the conventional corporate approach is to focus on curbing water usage and avoiding water pollution, I feel that forest conservation activities are more positive. Although I suppose the activities remain at the symbolic stage, I think that the concept of engaging in forest management in the watershed areas of each plant will appeal to society. From a global perspective, water-related problems will become the most important consideration in environmental problems. Even with regard to problems with forests in particular, against the backdrop of Japan’s post-war forest management failure, I think we have reached a time when society must consider how local communities and companies should participate in forest preservation.

Miyazaki: In that regard, I think that it is extremely important that companies, citizens, and the government cooperate in these activities rather than having one party stand out from the others. Recently, there have been active discussions to the effect that everyone should take on public burdens that have heretofore been borne mainly by the national government or public administration. Having inspected the watershed forest, I think that it is extremely significant that Gunma Prefecture, a public corporation and Kirin Holdings are planning to jointly undertake the project.

Tsunoda: As outings for tree thinning are very popular among city residents, a surprising number of shareholders and shareholders’ activities may want to participate. I think that the promotion of shareholder consciousness and development of shareholders who support CSR is another extremely important role of corporations.

Honda: Another consideration is the aspirations of shareholders and investors who engage in activities to move corporations in the direction of awareness of CSR, and how companies proceed in such circumstances is important. Although corporations make social contributions independently through local activities, we may also see the emergence of diverse trends such as links between local companies, links between upstream communities and downstream communities, or collaboration with the fishing industry. As Kyowa Hakko is a materials-oriented company, I think that in some areas we weren’t very skillful at communicating corporate targets and goals within and beyond the company. For its part, the Kirin Group, which offers consumer items, is adept at publicizing its activities. I would like to join together in thinking about social contributions within the context of the new company Kyowa Hakko Kirin.

Environmental Activities at the Takasaki Plant

Tsunoda: How do you plan to create synergy between the Kyowa Hakko Kirin and Kirin Pharma environmental management systems by means of the merger?

Azuma: We are now at the stage where targets and goals have been decided and exchange meetings are the next order of business. At Kyowa Hakko, plants take the lead in management system development. Although the laboratory management system will pose considerable difficulties, it has been decided to move forward with a company-wide integrated system. I think that the most important issue for Kyowa Hakko Kirin is CO2 emissions reduction. The pharmaceuticals industry has shown tremendous growth since 1990, reduction of emissions from the 1990 level is a difficult target. We would like to devise reduction measures such as meeting back-office daytime electricity requirements with renewable energy.

Ichihashi: The Takasaki Plant began operation in 1990. When the plant obtained ISO 14001 certification in 2001, it updated its boilers and converted boiler fuel from heavy oil to gas. The curbing of greenhouse gas emissions has been a watchword since that time. The fact is, the Takasaki area is one of the sunniest areas of Japan, and, while I don’t think renewable energy sources will provide sufficient electricity to operate the entire plant, I think it will be possible to increase renewable energy use little by little.

Miyazaki: I think that safety at pharmaceutical plants will become an important consideration for the public. Although beer is a familiar product, when it comes to pharmaceutical products, I think it is difficult for the public to understand the safety situation and how products are produced and controlled. How are you mindful of that at this plant?

Ichihashi: When we built the Takasaki Plant, we held a briefing session for area residents. As the Takasaki Plant is not a facility that produces pharmaceuticals by means of chemical synthesis, but rather one that manufactures pharmaceuticals using animal cells to which biotechnology has been applied, we rigorously prevent any release of genetically recombined animal cells from the plant. We have installed high-performance filters to filter the exhaust emitted from the plant. To eliminate organism activity in wastewater, we always include an inactivation process by means of steam blowing or alkaline addition. We dispose of solid waste after performing sterilization. Furthermore, we used data to explain that genetically recombined animal cells cannot survive in the ordinary environment outside the plant.

Hamaoka: Ever since completion of the plant, we have maintained communication with area residents through means including conducting periodic plant tours and participation in local beautification and trash collection activities.
In fiscal 2007, we completed fuel conversion for the principal boilers at the Yamaguchi Production Center Hofu and the Yokkaichi Plant (which account for much of the Group’s greenhouse gases emissions). These efforts achieved a combined CO2 emissions reduction of 83,700 tons per year. Even though Daiichi Fine Chemical was newly included in the Group in fiscal 2007, the Group’s overall CO2 emissions were 692,700 tons, a 14% reduction from the fiscal 1990 level. We expect to achieve the fiscal 2010 target of an 8% reduction from the fiscal 1990 level. Furthermore, we expect a ripple effect throughout the Group resulting from the installation at the Fuji Plant of photovoltaic power generation, a renewable energy source.

Global-warming Prevention Initiatives

Photovoltaic power generation systems, which emit no CO2 owing to the utilization of natural energy, are a clean energy source attracting attention as a global warming countermeasure. We installed a photovoltaic power generation system on the roof of the pharmaceutical plant, the building that receives the most solar radiation, and began generating electricity in January 2008. We anticipate annual output of 24,000 kilowatt-hours and expect the system to contribute to a reduction in electric power energy use at the Fuji Plant. We will continue to raise awareness of energy conservation among employees in ways going beyond the use of solar power and actively promote the Kyowa Hakko Kirin Group’s eco-activities.

On March 28, 2007, the Yamaguchi Production Center Hofu implemented boiler fuel conversion, a goal of many years. Previously, we had private power generation involving steam generated using an old C-grade heavy oil-fired boiler that was in use since construction of the plant more than 35 years ago. As the boiler had no desulfurization equipment, the plant accounted for more than 95% of the SOx emissions of the entire Group. Now we have dramatically reduced emissions, thanks to the purchase of steam from Hofu Energy Service (HES) and conversion to a gas-fired boiler. The blue bridge in the photograph is a pipe bridge for steam piped from HES.
Environment-friendly Products and Technologies

A Future Global Environment Supported by New Fermentation Biotechnologies

Green Sustainable Chemistry

The food products, medicines, and chemicals that support our healthy, affluent way of life are built on the knowledge-intensive production technologies of industries such as agriculture, forestry, fisheries, pharmaceuticals and chemicals. At a time when the world faces growing shortages of foodstuffs, global warming, environmental pollution, depletion of oil resources and other problems, expectations for green sustainable chemistry have increased. Accordingly, we will step up technical development in this field, which is based on production technologies that utilize biological functions.

Comparison of Materials Production Processes at Conventional Plants and Bioprocessing Plants

- **Remote past**
  - Plants, animals
  - Carbohydrate raw materials
  - Energy consumption
  - Materials production

- **Present**
  - Fossil resources
  - Biomass and agricultural waste
  - Carbohydrate raw materials
  - Materials production

Whereas large quantities of CO₂ originating from fossil resources (CO₂ from the remote past) are emitted in the material production process at conventional plants, no additional CO₂ is emitted by bioprocess plants, which utilize vegetable matter that has fixed CO₂ already present in our atmosphere.

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 (HFCs) in 2010 is planned in Japan and the U.S. In step with rapid expansion of the market for air conditioners and large freezers and other equipment that uses non-ozone layer depleting CFC substitutes (HFC R-407C, R-410A, etc.), the demand for CFC substitutes and highly soluble lubricating oil (refrigerant oil) for compressors has grown. With the aim of contributing to preservation of the global environment, to meet this demand, during fiscal 2008, Kyowa Hakko Chemical will increase 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.

Kyowa Hakko Bio

Feed Additive Amino Acids and Enzymes That Promote Environment-friendly Stockbreeding

**L-Lysine, L-Valine, L-Arginine Phytase, Driselase**

Kyowa Hakko Bio supports environment-friendly stockbreeding through the supply of feed additive amino acids (such as L-Lysine, L-Valine, L-Arginine) and enzymes (such as Phytase and Driselase).
Environmental and Safety Management

On October 1, 2008, the Kyowa Hakko Kirin Group established the Basic Policy on the Environment, Safety, and Product Safety and Action Guidelines. We engage in environmental and safety activities grounded in an ISO 14001 environmental management system and Occupational Safety and Health Management Systems (OSHMS). All business sites observe laws and regulations related to safety and the environment and engage in activities based on even more rigorous voluntary targets. We also engage in voluntary Responsible Care activities undertaken with full employee participation. To promote environmental consideration across the entire supply chain, we have begun activities with the objective of changing from the current ISO 14001 certification at each business site to ISO 14001 certification extended also to the head office, production sites and research laboratories in 2009.

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.

Environmental and Safety Audits Conducted in Fiscal 2007

An overview of the environmental and safety audits conducted in fiscal 2007 is provided in the table below.

<table>
<thead>
<tr>
<th>Scope of Activities</th>
<th>Environment and safety management regulations, environmental and safety law, environmental safety-related risk management; progress with the performance improvement of the Kyowa Eco-project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditors</td>
<td>Kyowa Hakko, consolidated and non-consolidated subsidiaries in Japan, overseas operations, and overseas subsidiaries.</td>
</tr>
<tr>
<td>Frequency</td>
<td>Kyowa Hakko, consolidated and non-consolidated subsidiaries in Japan, overseas operations, and overseas subsidiaries.</td>
</tr>
</tbody>
</table>

Complaints

In fiscal 2007, 13 complaints were received about Kyowa Hakko Kirin Group plants in Japan and overseas; six complaints about noise or vibration, three complaints about odors, two complaints about dust, one complaint about the color of wastewater, and one complaint about another matter. We regret the inconvenience caused to residents in nearby areas of the plants and 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

Kyowa Hakko Kirin has established the Basic Policy on the Environment, Safety, and Product Safety, engages in wide-ranging Responsible Care activities related to the environment and safety and rigorously operates a system of assessments at each product life-cycle stage, from research and development to use and disposal.

Safety Assessment of Chemical Products

Kyowa Hakko Kirin continuously conducts chemical product safety assessments in cooperation with the Japan Chemical Industry Association and the Japan Plasticizer Industry Association. In fiscal 2007, Group companies actively engaged in the Program for Gathering and Disseminating Safety Information on Existing Chemical Substances (Japan Challenge Program) and Kyowa Hakko Chemical, its subsidiary J-PLUS, Kyowa Hakko Kogyo and its subsidiary Daichi Fine Chemical have registered as sponsors (including consortium sponsorship) for a total of four substances and are currently gathering safety information.

Further, we held internal liaison meetings concerning the Registration, Evaluation, Authorisation and restriction of Chemicals (REACH) system, shared information, and made preparations for pre-registration. We also continued voluntary activities concerning conversion to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) hazard labels and 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 ethically, 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 use 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 2007 (Environment and Safety)

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Fiscal 2007 Target (Kyowa Hakko)</th>
<th>Fiscal 2007 Performance (Status of Progress)</th>
<th>Evaluation*</th>
<th>Medium-Term* Targets (Kyowa Hakko Kin)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Establishment of ISO 14001 environmental management system</strong></td>
<td>Continuous improvement of the Group's environmental management system at key business sites of Kyowa Hakko, Kyowa Hakko Bio, Kyowa Hakko Food Specialties, Kyowa Medex and consolidated subsidiaries</td>
<td><strong>Achieved</strong>: Compliance rate of 95%</td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Integration of ISO 14001 and Occupational Safety and Health Management System (OS&amp;HSMS)</strong></td>
<td>Environment and safety management systems in operation at all Group affiliates</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Audits of consolidated and non-consolidated subsidiaries</strong></td>
<td>Audits of sites of consolidated and non-consolidated subsidiaries and sites in other countries (100%)</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Ensuring compliance</strong></td>
<td>Zero failure legal infringements concerning environmental safety</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
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<tr>
<td><strong>Production and R&amp;D</strong></td>
<td></td>
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<tr>
<td><strong>Global warming prevention (CO₂ emissions)</strong></td>
<td>Reduction of CO₂ emissions to 6% below fiscal 1990 level by 2010**</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Unit energy consumption</strong></td>
<td>Reduction of unit energy consumption by 1% or more per annum</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Volume of waste disposal at landfill sites</strong></td>
<td>Maintaining zero emission, a target of 250 tons or lower</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Reduction in chemical substance emissions</strong></td>
<td>50% reduction in chemical substance emissions from fiscal 2003 levels in fiscal 2007</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
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<tr>
<td><strong>Atmosphere</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>SOx emissions</strong></td>
<td>Below 250 tons**</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>NOx emissions</strong></td>
<td>Below 731 tons**</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Dust emissions</strong></td>
<td>Below 287 tons**</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
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<tr>
<td><strong>Water</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Fresh water usage volume</strong></td>
<td>Average reduction in unit energy consumption of 1% or higher (38 plants)</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>COD levels</strong></td>
<td>Below 500 tons**</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
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<tr>
<td><strong>Nitrogen levels</strong></td>
<td>Below 695 tons**</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Phosphorous levels</strong></td>
<td>Below 25 tons**</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Disasters, accidents</strong></td>
<td>Reduction level of accidents and one accident at consolidated subsidiaries**, no environment or safety-related accidents</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Distribution environment and safety</strong></td>
<td>Rationalization of distribution, assurance of environmental and safety in distribution</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Green Office Plan (GDP)</strong></td>
<td>Reduction of at least 1% per annum in power consumption</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>LCA/Material balance</strong></td>
<td>Transparency and analysis in material balance at each business</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Green procurement</strong></td>
<td>Implementation of environmental consideration inquiries at business partner companies</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Thorough, environmental, safety and product safety assessments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Environmental-conscious technology and product development</strong></td>
<td>Realization of development of technologies and products</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Assurance of consumer safety and product user-friendliness</strong></td>
<td>Comprehensive product information and disclosure</td>
<td><strong>Achieved</strong></td>
<td><strong>Achieved</strong></td>
<td></td>
</tr>
</tbody>
</table>

* **Evaluation**: Achieved: Target, Change in the scope of application, Target reassessed

** Kyowa Hakko Bio includes companies with synergies with the Group, and includes approximately 50% of its total sales.

*** Kyowa Hakko Food Specialties includes Kyowa Medex and consolidated subsidiaries.

** The Kyowa Eco-Index compares unit emissions with Japanese averages on a production value basis. The Kyowa Eco-Index for production sites of the Group (Kyowa Hakko, Kyowa Hakko Bio, Kyowa Hakko Food Specialties, Kyowa Medex and their consolidated subsidiaries) is 60% of the 1990 level.
Material Balance by the Kyowa Hakko Group Business Operations

Material Balances

Resource Efficiency

Unit Emissions

Efficiency of packaging materials: 1.02 (IM 1.00)

Efficiency of fresh water: 0.98 (IM 1.00)

Efficiency of materials: 0.99 (IM 1.00)

Efficiency of packaging materials: 1.01 (IM 1.00)

Efficiency of fresh water: 0.98 (IM 1.00)

Efficiency of materials: 0.99 (IM 1.00)

Efficiency of packaging materials: 1.02 (IM 1.00)

Efficiency of fresh water: 0.98 (IM 1.00)

Efficiency of materials: 0.99 (IM 1.00)

Efficiency of packaging materials: 1.02 (IM 1.00)

Efficiency of fresh water: 0.98 (IM 1.00)

Efficiency of materials: 0.99 (IM 1.00)

Efficiency of packaging materials: 1.02 (IM 1.00)

Efficiency of fresh water: 0.98 (IM 1.00)

Efficiency of materials: 0.99 (IM 1.00)

Efficiency of packaging materials: 1.02 (IM 1.00)

Efficiency of fresh water: 0.98 (IM 1.00)

Efficiency of materials: 0.99 (IM 1.00)

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Efficiency of fresh water: 0.98 (IM 1.00)

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Efficiency of materials: 0.99 (IM 1.00)

Efficiency of packaging materials: 1.02 (IM 1.00)

Efficiency of fresh water: 0.98 (IM 1.00)

Efficiency of materials: 0.99 (IM 1.00)
Environmental Accounting

Principal facility investments in fiscal 2007 were for the installation of a photovoltaic power generation system at the Fuji Plant, the augmentation of nitrogen reduction facilities at the Yamaguchi Production Center Hofu and wastewater treatment facilities at the Kyowa Hakko Chemical Yokkaichi Plant.

<table>
<thead>
<tr>
<th>Environmental Protection Costs (¥ million)</th>
<th>FY2006</th>
<th>FY2007</th>
<th>Focus</th>
<th>FY2007</th>
<th>Comments with FY2006</th>
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</thead>
<tbody>
<tr>
<td><strong>In-Site Operating Costs</strong></td>
<td>1,037</td>
<td>4,135</td>
<td>611</td>
<td>2,465</td>
<td></td>
</tr>
<tr>
<td>(1) In-Site Operating Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Pollution Control Costs</td>
<td>485</td>
<td>1,899</td>
<td>458</td>
<td>1,880</td>
<td></td>
</tr>
<tr>
<td>(b) Water pollution control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Air pollution control, etc.</td>
<td>238</td>
<td>556</td>
<td>24</td>
<td>449</td>
<td></td>
</tr>
<tr>
<td>(d) Environmental Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Environmental Accounting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Environmental Activities</td>
<td>50</td>
<td>1,300</td>
<td>42</td>
<td>1,402</td>
<td></td>
</tr>
<tr>
<td>(4) Safety and Health</td>
<td>0</td>
<td>42</td>
<td>6</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>(5) Environmental Damage Costs</td>
<td>100</td>
<td>436</td>
<td>17</td>
<td>464</td>
<td></td>
</tr>
<tr>
<td>(6) Community Activities Costs</td>
<td>0</td>
<td>14</td>
<td>0</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>(7) Environmental Damage Related Costs</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,141</td>
<td>5,930</td>
<td>640</td>
<td>8,209</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- **Environmental Protection Costs:**
  - (1) In-Site Operating Costs
    - (a) Pollution Control Costs
      - (b) Water pollution control
        - (i) Participation of nitrogen reduction facilities, activated sludge treatment facilities, etc., elimination of organic materials, and odors at wastewater treatment facilities
      - (c) Air pollution control, etc.
        - (i) Participation of fine gas desulfurization and denitration facilities, exhaust gas facilities, deodorization facilities and pollution control facilities
    - (d) Environmental Management
      - (i) Waste disposal at landfill sites
  - (2) Environmental Accounting
    - (3) Environmental Activities Costs
    - (4) Safety and Health
    - (5) Environmental Damage Costs
    - (6) Community Activities Costs
    - (7) Environmental Damage Related Costs

**Environmental Activities**

**Environmental Performance**

- **Environmental Accounting**
  - **Breakdown**
    - (1) In-Site Operating Costs
    - (2) Upstream and Downstream Costs
    - (3) Environmental Activities Costs
    - (4) Safety and Health
    - (5) Environmental Damage Costs
    - (6) Environmental Damage Related Costs

**Safety Activities**

- Biokyowa engages in sophisticated safety activities in accordance with U.S. laws concerning occupational safety. The company conducts safety patrols, engages in safety education, and holds safety meetings and, for the past four years, has conducted independent safety programs. With respect to facilities, the company appropriately attaches safety guards and danger warnings and other safety markings to machinery and equipment and has installed machinery lockouts at more than 1,000 locations. Since 2006, the company has demonstrated high safety performance, maintaining a record of zero accidents resulting in lost working days.

**Environmental Activities**

- To cope with production volume increases, Biokyowa has completely updated the air-diffusion pipes of its waste liquid treatment facilities and is striving to enhance facility capabilities and safe operation. Also, the waste sludge generated from biotechnological treatment of amino acid fermentation wastewater is rich in nitrogen and phosphorus and serves as an excellent fertilizer for feed crop producers in the vicinity of the plant.
**Zero Emission Activities**

The Group’s final waste disposal at landfills in fiscal 2007 was 40 tons, a reduction of 58% from the previous year and an improvement on the target of 125 tons or less. This success indicates that Kyowa Eco-Project zero emission activities have taken root at business sites. The volume of solid waste generated, which was 101,300 tons at the Yamaguchi Production Center Hofu in fiscal 2006, increased to 158,101 tons in the following year. However, the Group’s waste recycling governance has made efforts to increase wastewater clarity. On the other hand, the recycling methods obtained from zero emission activities at the business sites have been actively utilized. Thanks to the efforts of this plant, the Group was able to reduce overall COD emissions by 22%, nitrogen emissions by 28%, and phosphorous emissions by 25%. The Yamaguchi Production Center Hofu also continued with the Mitajiri Bay Clean-up Campaign, a Seto Inland Sea clean-up activity.

**Measures Concerning Polychlorinated Biphenyls (PCBs)**

The Group places used transformers, condensers and stabilizers in secure storage facilities designed to prevent seepage into the ground. The reported increase in low-concentration PCBs accompanied the opening of terminal boxes containing insulating oil. Each business site has arranged for PCB treatment with Japan Environmental Safety Corporation.

**Waste Recycling Governance**

The development of waste recycling governance is a matter of increasing importance to companies. In addition to audits conducted at the time of conclusion of waste disposal outsourcing contracts, periodic outsourcing partner audits are an environmental safety requirement. Kyowa Hakko Kirin is studying the development of a governance system with a target implementation date of fiscal 2009. The system would be effective and entail little business sites burden thanks to features such as audit checklists, uniformity in periodic audit frequency, and the sharing of audit resources.

**Overall Flow of Waste Recycling and Disposal**

Although the Group’s volume of waste generated increased from the previous year, we achieved a reduction in plant waste emissions due to internal waste reduction. The landfill disposal rate is a low 0.03%.

**Phosphoric Acid Recovery and Recycling**

Facilities to recover phosphoric acid from fermentation waste-water installed at the Yamaguchi Production Center Hofu in fiscal 2007 were able to reduce overall COD emissions by 22%, nitrogen emissions by 28%, and phosphorous emissions by 25%. The Group was able to reduce overall COD emissions by 22%, nitrogen emissions by 16% and phosphorous emissions by 28%. The Yamaguchi Production Center Hofu also continued with the Mitajiri Bay Clean-up Campaign, a Seto Inland Sea clean-up activity.

**Environmental Performance**

- **COD, Nitrogen and Phosphorous Emissions**
  - COD emissions: 1,229 million tons (fiscal 2009), 1,072 million tons (fiscal 2010)
  - Nitrogen emissions: 650 million tons (fiscal 2009), 564 million tons (fiscal 2010)
  - Phosphorous emissions: 23 million tons (fiscal 2009), 21 million tons (fiscal 2010)

- **SOx, NOx and Dust Emissions**
  - SOx emissions: 499 million tons (fiscal 2009), 487 million tons (fiscal 2010)
  - NOx emissions: 790 million tons (fiscal 2009), 757 million tons (fiscal 2010)
  - Dust emissions: 408 million tons (fiscal 2009), 345 million tons (fiscal 2010)

**Air Pollution Prevention Measures**

The Group’s SOx emissions improved dramatically from 790 tons the previous year to 4.3 tons in fiscal 2007. The reason for this improvement was the decommissioning of boilers at the Yamaguchi Production Center Hofu that lacked desulphurization equipment. Also, we achieved a 40% reduction in emissions of NOx originating from the nitrogen components contained in heavy oil by means of fuel conversion from heavy oil to gas. In the results for air pollutant emissions in fiscal 2007, SOx emissions were decreased by 99.6%, NOx emissions by 50%, and dust emissions by 67%. A Kyowa Eco-Project activity to reduce air pollutant emissions through the installation of gas boilers, which began with boiler fuel conversion at the Sakai Plant in fiscal 2001, was nearly completed in fiscal 2007, when the above results were obtained. A remaining long-term issue for consideration is conversion of electric power at the plants to renewable energy sources (such as photovoltaic power generation).
Environmental Performance

Chemical Substance Reduction

To reduce emissions of chemical substances by 50% from the 2003 level by fiscal 2010

Restriction on Emissions of 12 Chemical Substances

Fiscal 2007 emissions into the environment of 12 chemical substances targeted by the chemical industry for priority efforts for emission reduction totaled 9.4 tons. Although the emissions figure increased from the previous year, this is the result of recalculation of chloroform emissions using a low-concentration gas-liquid equilibrium in the interest of greater accuracy.

Curbing Emissions of PRTR® Law Class I Chemical Substances

The total amount of PRTR Law Class I chemical substances handled by the Group increased from 225 thousand tons in the previous year to 264 thousand tons in fiscal 2007, and emissions into the environment increased slightly to 35.8 tons. The increases were mainly attributable to the above-mentioned review of the method of calculating chloroform emissions. The Group also ascertains annually emissions into the environment of 481 substances determined by the Japan Chemical Industry Association.

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 2007, we implemented voluntary soil contamination countermeasures in one location attendant on the buying or selling of land.

Preventing Ozone Layer Depletion

The Group is implementing periodic updating of large freezers at 15 business sites. Emissions of specified chlorofluorocarbons (CFCs) in fiscal 2007 decreased by 1.71 tons, or 14%, year on year.

Reducing Volatile Organic Compound (VOC) Emissions

The Group reports to prefectures the status of facilities subject to regulation under the Air Pollution Control Law and will undertake necessary reduction measures by fiscal 2010. We will also continue to improve processes and facilities not subject to regulation, with an emphasis on methanol, a substance for which emissions are high. The Group's VOC emissions in fiscal 2007 decreased slightly to 382 tons.

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Environmental Activities at Daiichi Fine Chemical

Daichi Fine Chemical, which joined the Group in June 2007, has its head-quarters plant in Takaoita City, Toyama Prefecture. The plant, which excels at organic synthesis and chiral technologies involving the use of enzymes, manufactures bulk pharmaceuticals and bulk vitamins. With regard to environmental activities, the plant obtained ISO 14001 certification in 1999 and maintains a framework for implementing a PDCA management cycle, including an Energy Conservation Committee and an Environment Committee.
### Site Data

#### Environmental Performance

<table>
<thead>
<tr>
<th>Site Data</th>
<th>Environmental Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source</strong></td>
<td>Environment Performance Comparison</td>
</tr>
<tr>
<td>FY 2006</td>
<td>FY 2007</td>
</tr>
<tr>
<td><strong>Volume of waste disposal (tons/year)</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Wastewater volume (million tons/year)</strong></td>
<td>0.23</td>
</tr>
<tr>
<td><strong>COD levels (tons/year)</strong></td>
<td>52%</td>
</tr>
<tr>
<td><strong>Dust emissions (tons/year)</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>NOx emissions (tons/year)</strong></td>
<td>100%</td>
</tr>
<tr>
<td><strong>SOx emissions (tons/year)</strong></td>
<td>3%</td>
</tr>
<tr>
<td><em><em>Unit energy consumption (S</em>/¥100 million of production)</em>*</td>
<td>10.5</td>
</tr>
</tbody>
</table>

#### Sources

1. **Fuji Plant/Fuji Research Park, Kyowa Hakko Kirin**
   - **Location**: 1188 Shimotogai, Nagazumi-cho, Saitama-gun, Saitama 370-8531
   - **Telephone**: +81-59-986-7600
   - **Site area**: 65,000 m²
   - **Main activities**: Pharmaceuticals
   - **ISO 14001 accreditation**: May 29, 2000

2. **Sakai Plant, Kyowa Hakko Kirin**
   - **Location**: 1-1-53 Takasu-cho, Sakai-ku, Osaka 590-8554
   - **Telephone**: +81-72-223-5554
   - **Site area**: 21,000 m²
   - **Main activities**: Pharmaceuticals
   - **ISO 14001 accreditation**: November 27, 2000

3. **Takasaki Plant, Kyowa Hakko Kirin**
   - **Location**: 100-1 Hagovara-cho, Takasaki-shi, Gunma 370-0013
   - **Telephone**: +81-27-353-2011
   - **Site area**: 125,000 m²
   - **Main activities**: Pharmaceuticals
   - **ISO 14001 accreditation**: November 30, 2001

4. **Tokyo Research Park, Kyowa Hakko Kirin**
   - **Location**: 3-6-6 Aoyama, Minato-ku, Tokyo 117-8533
   - **Telephone**: +81-3-6769-2595
   - **Site area**: 101,071 m²
   - **Main activities**: Pharmaceuticals (basic research)
   - **ISO 14001 accreditation**: —

---

**Performance Comparison**

<table>
<thead>
<tr>
<th>Source</th>
<th>FY 2006</th>
<th>FY 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Volume of waste disposal (tons/year)</strong></td>
<td>2.2</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>Wastewater volume (million tons/year)</strong></td>
<td>0.4</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>COD levels (tons/year)</strong></td>
<td>78%</td>
<td>78%</td>
</tr>
<tr>
<td><strong>Dust emissions (tons/year)</strong></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>NOx emissions (tons/year)</strong></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>SOx emissions (tons/year)</strong></td>
<td>62%</td>
<td>62%</td>
</tr>
<tr>
<td><em><em>Unit energy consumption (S</em>/¥100 million of production)</em>*</td>
<td>10.5</td>
<td>10.5</td>
</tr>
</tbody>
</table>

---

**Yamaguchi Production Center Hofu, Kyowa Hakko Bio**

- **Location**: 1-1 Kyowa machi, Hofu-shi, Yamaguchi 755-8501
- **Telephone**: +81-836-22-5500
- **Site area**: 479,000 m²
- **Main activities**: Biochemicals, pharmaceuticals
- **ISO 14001 accreditation**: September 11, 2000

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

- **Location**: 2548 Fujimayagani, Ube-shi, Yamaguchi 755-4501
- **Telephone**: +81-836-22-5500
- **Site area**: 479,000 m²
- **Main activities**: Biochemicals, pharmaceuticals
- **ISO 14001 accreditation**: September 11, 2000

---

**Kyowa Hakko Kirin**

- **Headquarters Plant**: Kyowa Hakko Kirin
- **Sanriku Plant**: Kyowa Hakko Kirin
- **Sakai Plant**: Kyowa Hakko Kirin
- **Harima Plant**: Kyowa Hakko Kirin
- **Ibaraki Plant**: Kyowa Hakko Kirin
- **Gifu Plant/Fuji Research Park**: Kyowa Hakko Kirin
- **Tokyo Research Park, Kyowa Hakko Kirin**
- **Chiba Plant**: Kyowa Hakko Kirin
- **Takasaki Plant**: Kyowa Hakko Kirin
- **Chidori Plant**: Kyowa Hakko Chemical
- **Sakai Plant**: Kyowa Hakko Kirin

---

**Environmental Performance**

- **Phosphorous levels (tons/year)**: 0.02 0.00 0%
- **Nitrogen levels (tons/year)**: 0.05 0.05 100%
- **COD levels (tons/year)**: 0.23 0.12 52%
- **Dust emissions (tons/year)**: 0.07 0.07 100%
- **NOx emissions (tons/year)**: 1.35 1.35 100%
- **SOx emissions (tons/year)**: 0.12 0.12 100%

---

**Unit energy consumption (S*/m²-floor area)**: 0.083 0.084 101%

---

**Kyowa Hakko Kirin Group Sustainability Report 2008**

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- **Chiba Plant**: Kyowa Hakko Chemical
- **Takasaki Plant**: Kyowa Hakko Kirin
- **Chidori Plant**: Kyowa Hakko Chemical

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---

**Unit energy consumption (S*/m²-floor area)**: 0.083 0.084 101%
### Environmental Performance

<table>
<thead>
<tr>
<th>Location</th>
<th>Main activities</th>
<th>ISO 14001</th>
<th>Accreditation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tsuchiura Plant, Kyowa Hakko Chemical</td>
<td>Pharmaceuticals, Bio-Chemicals, Chemicals</td>
<td>November 27, 2000</td>
<td></td>
</tr>
<tr>
<td>Chiba Plant, Kyowa Hakko Chemical</td>
<td>Pharmaceutical, Bio-Chemicals, Chemicals, Food</td>
<td>November 27, 2000</td>
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</tr>
<tr>
<td>Tsuichiura Plant, Kyowa Hakko Food Specialties Including Healthcare Tsuichiura Plant of Kyowa Hakko Bio</td>
<td>Pharmaceuticals, Bio-Chemicals</td>
<td>March 21, 2000</td>
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<tr>
<td>Fuji Plant, Kyowa Medex</td>
<td>Pharmaceuticals, Bio-Chemicals, Chemicals, Food</td>
<td>November 26, 2001</td>
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</tbody>
</table>

#### Unit energy consumption (kWh per 100 million yen of production)

<table>
<thead>
<tr>
<th>Location</th>
<th>FY2005</th>
<th>FY2006</th>
<th>FY2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tsuchiura Plant, Kyowa Hakko Chemical</td>
<td>34.4</td>
<td>37.4</td>
<td>102%</td>
</tr>
<tr>
<td>Chiba Plant, Kyowa Hakko Chemical</td>
<td>17.8</td>
<td>17.9</td>
<td>102%</td>
</tr>
<tr>
<td>Tsuichiura Plant, Kyowa Hakko Food Specialties Including Healthcare Tsuichiura Plant of Kyowa Hakko Bio</td>
<td>34.4</td>
<td>37.4</td>
<td>102%</td>
</tr>
<tr>
<td>Fuji Plant, Kyowa Medex</td>
<td>14.0</td>
<td>15.5</td>
<td>111%</td>
</tr>
</tbody>
</table>

#### Volume of waste materials (tons/year)

<table>
<thead>
<tr>
<th>Location</th>
<th>FY2005</th>
<th>FY2006</th>
<th>FY2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tsuchiura Plant, Kyowa Hakko Chemical</td>
<td>32,720</td>
<td>38,499</td>
<td>118%</td>
</tr>
<tr>
<td>Chiba Plant, Kyowa Hakko Chemical</td>
<td>24,000</td>
<td>188,000</td>
<td>721%</td>
</tr>
<tr>
<td>Tsuichiura Plant, Kyowa Hakko Food Specialties Including Healthcare Tsuichiura Plant of Kyowa Hakko Bio</td>
<td>10,000</td>
<td>741</td>
<td>72%</td>
</tr>
<tr>
<td>Fuji Plant, Kyowa Medex</td>
<td>7.4</td>
<td>4.5</td>
<td>62%</td>
</tr>
</tbody>
</table>

#### Volume of waste disposal at landfill sites (tons/year)

<table>
<thead>
<tr>
<th>Location</th>
<th>FY2005</th>
<th>FY2006</th>
<th>FY2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tsuchiura Plant, Kyowa Hakko Chemical</td>
<td>21</td>
<td>19</td>
<td>95%</td>
</tr>
<tr>
<td>Chiba Plant, Kyowa Hakko Chemical</td>
<td>2.4</td>
<td>2.6</td>
<td>108%</td>
</tr>
<tr>
<td>Tsuichiura Plant, Kyowa Hakko Food Specialties Including Healthcare Tsuichiura Plant of Kyowa Hakko Bio</td>
<td>43</td>
<td>3</td>
<td>7%</td>
</tr>
<tr>
<td>Fuji Plant, Kyowa Medex</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

#### Performance Comparison

<table>
<thead>
<tr>
<th>Location</th>
<th>FY2006</th>
<th>FY2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tsuchiura Plant, Kyowa Hakko Chemical</td>
<td>11,4</td>
<td>117</td>
</tr>
<tr>
<td>Chiba Plant, Kyowa Hakko Chemical</td>
<td>0.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Tsuichiura Plant, Kyowa Hakko Food Specialties Including Healthcare Tsuichiura Plant of Kyowa Hakko Bio</td>
<td>0.05</td>
<td>0.12</td>
</tr>
<tr>
<td>Fuji Plant, Kyowa Medex</td>
<td>0.00</td>
<td>0.0</td>
</tr>
</tbody>
</table>

### Financial Data

#### Consolidated Financial Data (Kyowa Hakko)

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Sales (¥ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>382,119</td>
</tr>
<tr>
<td>16</td>
<td>354,274</td>
</tr>
<tr>
<td>15</td>
<td>353,440</td>
</tr>
<tr>
<td>14</td>
<td>358,963</td>
</tr>
<tr>
<td>13</td>
<td>348,638</td>
</tr>
</tbody>
</table>

#### Operating Income Composition by Industry Segment (FY2007)

<table>
<thead>
<tr>
<th>Segment</th>
<th>FY2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharma</td>
<td>39,390</td>
</tr>
<tr>
<td>Bio-Chem</td>
<td>25,535</td>
</tr>
<tr>
<td>Chemical</td>
<td>33,567</td>
</tr>
<tr>
<td>Food</td>
<td>26,836</td>
</tr>
</tbody>
</table>

#### R&D Expenses to Net Sales Ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>2.0%</td>
</tr>
<tr>
<td>16</td>
<td>2.1%</td>
</tr>
<tr>
<td>15</td>
<td>2.2%</td>
</tr>
<tr>
<td>14</td>
<td>2.3%</td>
</tr>
<tr>
<td>13</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

#### Sales Composition by Industry Segment (FY2007)

<table>
<thead>
<tr>
<th>Segment</th>
<th>FY2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharma</td>
<td>11.5%</td>
</tr>
<tr>
<td>Bio-Chem</td>
<td>25.4%</td>
</tr>
<tr>
<td>Chemical</td>
<td>18.7%</td>
</tr>
<tr>
<td>Food</td>
<td>24.7%</td>
</tr>
</tbody>
</table>

#### Sales to Net Sales

<table>
<thead>
<tr>
<th>Year</th>
<th>FY</th>
</tr>
</thead>
<tbody>
<tr>
<td>04</td>
<td>114%</td>
</tr>
<tr>
<td>05</td>
<td>110%</td>
</tr>
<tr>
<td>06</td>
<td>104%</td>
</tr>
<tr>
<td>07</td>
<td>102%</td>
</tr>
</tbody>
</table>

#### R&D Expenses

<table>
<thead>
<tr>
<th>Year</th>
<th>¥ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>07</td>
<td>34,109</td>
</tr>
<tr>
<td>06</td>
<td>33,342</td>
</tr>
<tr>
<td>05</td>
<td>25,876</td>
</tr>
<tr>
<td>04</td>
<td>29,206</td>
</tr>
</tbody>
</table>

#### Net Income

<table>
<thead>
<tr>
<th>Year</th>
<th>¥ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>07</td>
<td>20,575</td>
</tr>
<tr>
<td>06</td>
<td>17,392</td>
</tr>
<tr>
<td>05</td>
<td>10,017</td>
</tr>
<tr>
<td>04</td>
<td>6,073</td>
</tr>
</tbody>
</table>

#### Net Sales

<table>
<thead>
<tr>
<th>Year</th>
<th>¥ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>07</td>
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<tr>
<td>06</td>
<td>354,274</td>
</tr>
<tr>
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<tr>
<td>04</td>
<td>358,963</td>
</tr>
<tr>
<td>03</td>
<td>348,638</td>
</tr>
</tbody>
</table>

#### Number of Employees

<table>
<thead>
<tr>
<th>Year</th>
<th>03</th>
<th>04</th>
<th>05</th>
<th>06</th>
<th>07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio-Chem</td>
<td>42</td>
<td>40</td>
<td>42</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>Pharma</td>
<td>30</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
<td>68</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
</tbody>
</table>

#### Operating Income

<table>
<thead>
<tr>
<th>Year</th>
<th>¥ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>07</td>
<td>39,390</td>
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<tr>
<td>06</td>
<td>25,535</td>
</tr>
<tr>
<td>05</td>
<td>33,567</td>
</tr>
<tr>
<td>04</td>
<td>26,836</td>
</tr>
</tbody>
</table>

#### R&D Expenses to Net Sales

<table>
<thead>
<tr>
<th>Year</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>07</td>
<td>2.1%</td>
</tr>
<tr>
<td>06</td>
<td>2.2%</td>
</tr>
<tr>
<td>05</td>
<td>2.3%</td>
</tr>
<tr>
<td>04</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

#### Reference Information

- Kyowa Hakko recalled part of its shipment of CONIEL® tablets, an agent for the treatment of hypertension and angina pectoris available on the Japanese market. We deeply apologize for causing any inconvenience and concern to patients, medical institutions and others involved. No health problems have been reported in relation to this matter. We are making a sincere effort to prevent the recurrence of such an incident.

- From September 2007 to February 2008, Kyowa Hakko recalled all of its shipment of CONIEL® tablets, an agent for the treatment of hypertension and angina pectoris available on the Japanese market. We deeply apologize for causing any inconvenience and concern to patients, medical institutions and others involved. No health problems have been reported in relation to this matter. We are making a sincere effort to prevent the recurrence of such an incident.

- The number of employees was 7,917 as of June 30, 2008.

- Reference information: Kirin Holdings Company, Limited (the consolidated net sales for the Pharmaceuticals business segment (Kirin Pharma Company, Limited) and its consolidated subsidiaries) in the fiscal year ended December 2007 were ¥109,000 million.
For the past five years I have prepared a third-party social responsibility assessment. This year, the corporate structure has changed, and I supposed that some sort of drastic change might have occurred. In fact, however, I was relieved to find continuity with the CSR efforts implemented heretofore.

Among the many matters explained, the highlight this year for me was boiler fuel conversion at the Yamaguchi Production Center. In this initiative, Kyowa Hakko constructed a pipe bridge to receive a supply of 20-atmosphere steam from a neighboring industrial complex in order to discontinue use of its aged C-grade heavy oil boilers. It seems that the new heat source is a power generation boiler, and the supplied steam is generated using waste heat that was previously discarded. As companies that principally use bioprocesses can utilize even somewhat low-temperature heat sources of about 200°C more effectively than ordinary chemical companies, Kyowa Hakko was able to effectively utilize previously unproductive waste heat. The effective harnessing of waste heat by the Yokkaichi Plant, which had succeeded in reducing CO₂ emissions by fully 25% by converting C-grade heavy oil to LNG, is a highly effective measure that reflects a spirit of avoiding wastefulness at all costs.

One matter of concern is that these activities leave nearly no room for further fuel conversion. It seems that while leading-edge means to achieve future reductions in CO₂ emissions are available, only measures with poor investment efficiency remain: for instance, photovoltaic power generation equipment, such as that used at the Fuji Plant, or the introduction of fuel cells.

That is to say, Kyowa Hakko Kirin has reached an upper limit in its environmental response. A similar ceiling has likely been reached with regard to emissions of harmful chemical substances. Although an upper limit appeared to have been reached with regard to reduction in COD, nitrogen and phosphor emissions, I regard the start of operation of phosphoric acid recovery equipment at the Yamaguchi Production Center in 2007 to be highly significant.

Despite the extreme scarcity of the earth’s phosphor resources, the phosphor used in fertilizers ultimately flows into the seas and oceans. There is no other way to return phosphor to the land than to capture fish and plankton and use them as fertilizer. Flushing phosphor into the sea is not correct from the perspective of resource conservation either, and the installation of recovery equipment is desirable.

The stakeholder meeting section of the report indicates that forest conservation activities aimed at conserving water resources has begun. This is similar to the introduction of photovoltaic generation, in that it is a final environmental response that can be taken when the upper limit of CO₂ emissions reduction has been reached; the most prominent impression I obtained this year is that, at last, Kyowa Hakko Kirin has reached its destination in environmental activities. The most important thing is for the company to continue with its policies and carry on with its activities.

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 integrated 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)