UNITIKA Group
Corporate Social Responsibility
Report 2006

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Message From the President

Enriching Lives and Helping the Environment
Being a Public-Spirited Corporation

The 21st Century has been called the ‘Century of the Environment’—an era when corporations must take greater responsibility in answering the public’s concerns over global warming, pollution and other global environmental issues. The Unitika Group’s corporate philosophy is to contribute to the public good by enabling better living through technology, so we have been active in helping create the infrastructure needed for greater resource recycling in Japan. Our wide range of environmental preservation initiatives includes bringing recycling technology to garbage incinerating and water treatment methods designed to reduce environmental impact, and providing air, water and soil surveys and analysis for environmental assessments and preservation.

Unitika first started working on environmental issues in 1993, when we created the Unitika Global Environment Charter, and have since used it as the blueprint for subsequent active work on environmental issues. The Charter was followed by the Unitika Action Guidelines, created and implemented to concretize our environmental management methods, and by work on gaining ISO 14001 certification throughout the Group. (ISO 14001 is the international ISO standard for environmental management systems.) We have stepped up our certification efforts, and now all the major Unitika production sites and main Group companies are certified.

Biodegradable materials have recently been gaining attention, and were featured at Expo 2005. Unitika has taken the initiative in this area by developing Terramac, a biodegradable plastic material made of a polyactic acid synthesized from corn or other plant resources. We have marketed it as a film, nonwoven fabric, fiber and resin. Terramac is an environmentally-friendly material with a promising future as a next-generation polymer with a growing range of applications. It can reduce reliance on the earth’s greatly depleted oil resources, and helps combat global warming since it doesn’t increase atmospheric CO2 when incinerated.

This fiscal year, the Unitika Group has begun a new medium-term (three-year) management plan called New Progress 8 (NP-8). NP-8 is designed to encourage environmentally-aware business models, expanding business areas such as Terramac and our environmental plants. It calls for more environmentally-oriented management through steps such as an ongoing shift in fuel sources from fuel oil to natural gas. This shift is already underway—we started operating gas cogeneration facilities at our Uji (Kyoto) Plant in October 2004 and Okazaki (Aichi) Plant in April 2006, and have scheduled work on another of these facilities at our Sakoshi (Hyogo) Plant next fiscal year. These developments are creating steady progress on our goal of major reductions in air pollution at Group production sites. The Group’s management vision is to be a public-spirited corporation that enriches lives and helps the environment, and our work on bringing this vision to life will continue to include a range of environmentally-oriented corporate activities.

Starting this fiscal year, the Environmental Report we put out every year has been reborn as the CSR Report you are now reading, which will provide information on a greater range of areas. The change reflects the increasingly important role that work on the environment and other areas of CSR (corporate social responsibility) plays in today’s corporations. I hope this report will give you a better understanding of the Group’s corporate activities.
Notes on FY 2006 Report; Company Overview

This CSR Report covers the FY 2005 environmental and CSR activities of the Unitika's domestic production sites, and twelve of the domestic Group companies. It was created in line with the “Guidelines for Environmental Reports 2003” issued by Japan's Ministry of the Environment. In light of the greater attention and importance the Japanese public is now attaching to corporate social responsibility (CSR), the FY 2006 Report has added a new section that will be continued in future Reports. It covers management principles and organizations, with information on areas such as corporate governance and internal regulations.

Company Overview

**Name:** Unitika Ltd.  
**Founded:** June 19, 1889  
**Capital:** 23.7 billion yen (as at March 31, 2006)  
**Number of employees (consolidated):** 4,907 (as at March 31, 2006)  
**Sales (consolidated):** 216.0 billion yen (FY 2005)  
**Main business areas (consolidated):** Polymers (films, resins, chemical products, spunbond), environmental/advanced materials (engineering, pharmaceutical products, functional materials), fibers (synthetic and natural fiber yarns, staple fibers, woven and knitted fabrics), health & amenity products, other business areas

Unitika Production Sites in Japan

- Uji Plant
- Okazaki Plant
- Sakoshi Plant
- Tarui Mill
- Toyohashi Office
- Tokiwa Mill
- Miyagawa Mill
- Kaizuka Office
- Central R&D Laboratories

Unitika Group Companies

- Unitika Fibers Ltd.
- Unitika Textiles Ltd.
- Unitika Plant Engineering Co., Ltd.
- Unitika Glass Fiber Co., Ltd.
- Unitika Environmental Technical Center Co., Ltd.
- Unitika Protec Sakoshi Ltd.
- Nippon Ester Co., Ltd.
- Ad'all Co., Ltd.
- Unitika Spunbond Products Co., Ltd.
- Unitika Logistics Co., Ltd.
- Unitika Uji Kosan Co., Ltd.
- Union Co., Ltd.

Sales (Non-Consolidated/Consolidated)

(Billions of yen)

<table>
<thead>
<tr>
<th>Year</th>
<th>Non-consolidated</th>
<th>Consolidated</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>216.0</td>
<td>216.0</td>
</tr>
<tr>
<td>2004</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>2003</td>
<td>180</td>
<td>180</td>
</tr>
<tr>
<td>2002</td>
<td>160</td>
<td>160</td>
</tr>
</tbody>
</table>

Sales Share of Each Business Unit (FY 2005, Consolidated)

- Polymers: 48%
- Fibers: 12%
- Environmental/advanced materials: 11%
- Health & amenity products, other: 29%
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Corporate Governance

Unitika’s management vision is to be a public-spirited corporation that enriches lives and helps the environment. To bring this vision to our business, we are implementing a new medium-term management plan called New Progress 8 (NP-8) that covers dual areas for improvement—our business strategy and our corporate governance strategy. This section describes the Group’s ongoing corporate governance efforts.

Basic Policy for Corporate Governance

On March 2, 2006, Unitika announced a new medium-term management plan called New Progress 8 (NP-8) to be implemented over the three-year period through FY 2008. The plan covers both business strategy and corporate governance strategy. Under the rapid decision-making, we work on the management of valuing the stakeholder through strengthening compliance and risk management, and timely and accurate information disclosure. Consistent adherence to this management approach will increase Unitika’s corporate value in today’s increasingly globalized economy, to enable sustained growth.

Overview of NP-8

Management vision

To be a public-spirited corporation that enriches lives and helps the environment.

Business strategy

Strengthening business competency

Corporate governance strategy

Dual improvement areas

Strengthening corporate quality

Implementation

Unitika’s management system sets forth two separate function areas: management decision-making/supervisory functions (corporate governance) and business execution functions (management). The Board of Directors specializes in the first set of functions, aided by the Management Strategy Council, an organization that provides directors the opportunity for more in-depth discussions on policies and issues pertaining to all aspects of the Group’s management. The second set of functions are implemented by the Executive Director System and a President’s advisory body known as the Business Execution Council, which speed decision-making and demarcate areas of responsibility.

On May 9, 2006, we created a new organization known as the CSR/Compliance Group, along with a basic policy on internal regulation in line with Japan’s Company Law and the regulations enforcing it. On June 29, we reviewed our management organization, making changes such as enabling directors to also serve as executive officers. These changes are improving the Group’s overall management mobility and effectiveness.
Creating a clear basic policy and an organization based on it has given us a framework for responsible internal regulation worthy of a good corporate citizen.

**Basic Policy**
Set forth in the eight items of Unitika’s Basic Policy for Internal Regulation, specified on May 9, 2006.

1. Organization to ensure that the execution of job duties by directors and employees complies with all applicable legislation and the Articles of Incorporation
2. Items pertaining to saving/managing information on directors’ execution of job duties
3. Regulations on loss hazard management; other organizational elements
4. Organization to ensure that execution of directors’ job duties is performed efficiently
5. Organization to ensure suitability of operations done by corporate groups
6. When auditors ask for appointment of employees to act as assistants
   Items pertaining to organization for those employees, and to their independence from directors
7. Organization used for directors and employees to report to auditors; organization for reporting to other auditors
8. Other organizational elements to ensure that auditing by auditors is performed effectively

**Organization**
The diagram below shows the organization used for corporate governance, and to ensure fair corporate activities. The basic elements correspond to Unitika’s Basic Policy for Internal Regulation (outlined above). This organization is used to strictly enforce internal regulation-compliance, information saving/management, risk hedging, increasing the execution efficiency of director job duties, and ensuring the suitability of operations.
On April 1, 2001, Unitika instituted a 12-page document called the Unitika Action Standards that sets forth specific standards for implementing the Unitika Action Charter of 1998. The Unitika Action Standards have been distributed to all company employees and directors, and we continue to promote corporate activities dedicated to upholding the law and a public-spirited corporate ethic. We have also been working to ensure safe product manufacturing and sales, and implemented product safety management regulations on October 24, 1994. In response to the regulations enforced by the Company Law in May 2006, we created an internal regulation system to promote companywide compliance.

The Unitika Action Charter is our basic policy on how best to fulfill our mission as a public-spirited corporation. It applies to all directors and employees of Unitika and Unitika Group companies. In addition to our routine work on interpreting and implementing the statutes and regulations relevant to our business areas, we make sure our employees are kept fully informed of our Action Standards by having department heads explain them whenever possible.

**Unitika Action Charter**

The Unitika Action Charter is a set of guidelines on how to act for the public good by complying with laws and international standards and guidelines.

1. Develop and provide materials and services useful to the public, ensuring adequate concern for the environment and safety.
2. Engage in competition fairly and freely, maintaining a sound relationship to political and administrative areas.
3. Provide for communication with a wide cross-section of the public, disclosing corporate information in a timely and impartial manner.
4. Ensure safe and accommodating workplace environments, and respect the personalities and individuality of employees.
5. Respect foreign cultures and customs, and contribute to regional development.
6. Respond resolutely to forces that threaten national or international order or security.
7. Act as a good corporate citizen to respect basic human rights, and engage in activities that contribute to the public good.

To ensure compliance with the Unitika Action Charter, we established the Corporate Action Committee at the time of its creation. Chaired by the President, the Committee keeps employees informed on the Action Charter, sets specific plans and rules, and discusses and executes compliance verification. In May 2006, the Compliance Committee underwent a reorganization for improvement.

In response to a public interest whistleblower protection law put into effect by Japan’s government on April 1, 2006, we implemented a set of whistleblowing (internal reporting) regulations on the same day, making them part of our companywide business regulations. We have set up two contact points (one within the company and one outside the company) that employees can contact to immediately report any malfeasance or illegal activities they encounter. The regulations are part of the strict compliance measures we ensure within the company, driven mainly by the Compliance Committee.
Ensuring Product Safety

Central Committee on Product Liability

- **Committee members:** Members include the head of each business division, directors in charge of each business area, and directors in charge of management.

- **Work areas:**
  - Creating basic policy pertaining to product safety
  - Creating yearly plans pertaining to product safety
  - Supervising results of product safety reviews
  - Keeping employees informed on product safety issues

Product Liability Review Board

- **Established in each business department, section and business unit.** The relevant division head appoints the committee chairman and secretariat.

- **Committee members:** Department heads in charge of production/technology, department heads in charge of sales, and members appointed by the division head.

- **Main work areas:**
  - Reviews pertaining to safety issues in product designs/specifications, manufacturing and distribution
  - Reviews pertaining to product displays and warnings
  - Creating product safety standards and submitting revisions or deletions

Product Liability Manager

- **Appointed by each division head in line with the type of business**

- **Main work areas:**
  - Investigating and checking health and environmental effects of product handling and use
  - Creating and reviewing product handling cautions for display on product containers, wrapping and tags
  - Creating and distributing product safety data sheets

Unitika's product safety regulations contain seven articles that set forth areas such as basic policy, division of responsibility areas, implementation organization, and bylaws on manual operations and application (space constraints prevent reproducing the articles in entirety). Unitika and Unitika Group companies work to ensure that product manufacturing and sales are carried out safely, in compliance with these regulations. They are implemented by the organization illustrated below, headed by the Central Committee on Product Liability.
Information Management

This section outlines our work on information management and security, which are becoming increasingly important issues as the growth of the Internet provides ever easier access to information.

Information Security

To maintain the confidentiality of information assets and prevent unauthorized use, Unitika set up the Basic Policy on Information Security on April 1, 2005. This document contains our Information Security Declaration and sets forth our steadfast approach to implementing it, while setting up a management and operation organization driven by our Information Security Committee. The Basic Policy is designed to ensure protection and effective use of the information we handle in the course of our business activities.

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**Unitika Information Security Declaration (Preamble Omitted)**

1. We will take steps to ensure the security of information as set forth by our Information Security Policy.
2. We will create an information security management organization, and implement it in an systematic manner.
3. We will educate and train our directors and all employees on our Information Security Policy, working to prevent information security accidents.
4. We will work on improving our information security measures on an ongoing basis.
5. We will comply with all personal information protection laws and all relevant statutes and standards.


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**Organization of Information Security Committee**

- **Information Security Committee Chairman**
  - Director in charge of Planning and Management Division

- **Manager**
  - Head of Auditing Office

- **Secretariat**
  - In charge of management information: Head of Management Planning Department
  - In charge of personal information: Head of Personnel/General Affairs Department

- **Management Information Subcommittee**
  - Chairman: Head of Planning and Management Division
  - Members: Head of relevant business department, head of relevant management department

- **Personal Information Subcommittee**
  - Chairman: Director in charge of Personnel/General Affairs Department
  - Members: Head of relevant business department, head of relevant management department

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**Protecting Personal Information**

In response to a personal information protection law put into effect by Japan’s government on April 1, 2005, we implemented a set of personal information protection regulations on the same day throughout the company. The strictly worded and implemented regulations contain 33 detailed articles that cover areas such as collection and use of personal information, appropriate management, auditing and disposal methods, and penalties.
Basic Environmental Policy

Unitika named 1993 an Environmental first year, when we enacted the Unitika Global Environment Charter, consisting of our pledge, basic philosophy and action guidelines. Since then, we have compiled this Charter to ensure that our corporate management methods are environmentally aware, working on a range of environmental activities.

Unitika Global Environment Charter

The growth and development of mankind is rapidly altering our planet's air, water and soil, threatening both the global biosphere and our own future, since both must depend on a finite ecosystem. As a corporation with more than a century of business activities contributing to the public good, we are highly aware of the demanding conditions now facing the global environment. The Charter is the declaration of our intention to focus more attention on protecting and helping the environment, making appropriate environmental action the core of our business activities.

Basic Philosophy

Better living through technology, driven by corporate activities that help humans and nature coexist.

Action Guidelines

1. Continual awareness of the global environment

The Unitika Group always considers the effects of our corporate activities on the global environment, following a rigorous set of management procedures during product manufacture to prevent harm to it.

2. Contributing through technology development

We aggressively research and develop technologies to protect and help the global environment.

3. Using resources and energy efficiency

We promote efficient use of resources and energy, and recycle limited resources.

4. Carrying out PR and educational activities

We organize a large number of PR activities that provide information on protecting and helping the global environment, and promote a wide range of educational events.

5. Drawing on the complete range of Unitika Group competencies

Following the mandates of the Charter, we draw on our complete range of competencies to protect and help the global environment.

Medium-Term Environmental Plan

FY 2005 was the deadline we set for meeting the four numerical targets of our third Environmental Plan. While we met two of these targets—reductions in industrial waste and energy consumption—we failed to meet the targeted improvements in the loss recycling rate in production processes and in our energy unit requirement. The progress on our targets is described in the section on our work on reducing environmental impact starting on page 13. We have examined and analyzed the data from our efforts, and applied it to the fourth Medium-Term Environmental Plan we have created, which starts in FY 2006. More demanding target values have been set for the items that met their targets in the third Plan, and we have renewed our commitment to improve the items that didn’t meet their targets. Our four numerical target values are shown below. The targeted improvement in the loss recycling rate in production processes has been set higher since we have begun full operation of a new thermal recycling program. FY 2008 is the deadline for meeting these goals.

Goals to Meet by Deadline (FY 2008)

1. Industrial waste [-6% reduction (Compared to FY 2004 level)]
2. Loss recycling rate in production processes [7.0% improvement (Compared to FY 2004 level)]
3. Energy unit requirement [1% improvement per year]
4. Energy consumption quantity [14% reduction (Compared to FY 1990 level; deadline is FY 2010)]
Unitika’s History of Environmental Preservation Activities

Unitika’s unbroken 33-year record of progress on environmental management will continue yielding advances into the future.

Pollution first became a major issue in Japan in 1973. That year, Unitika created the Environmental Preservation Regulations, making a clear distinction between environmental measures and outward-directed production activities, to enable compliance with regulatory and standards values.

In 1991, we created a new companywide organization called the Environmental Preservation Committee, followed in 1993 by the Unitika Global Environment Charter. That year we began yearly environmental auditing, establishing the basic direction for our environmentally-aware management style that has continued to this day. In 1998, we created the Unitika Action Charter, a document that sets forth the basic action policy needed to fulfill our Unitika Group mission as a public-spirited corporation. Its first article sets forth our responsibility for environmental and safety awareness.

The Unitika Action Standards created and implemented in April 2001 expanded on the Unitika Action Charter by setting forth specific action standards for Unitika organizations and employees to comply with in the performance of their routine business activities. The Action Standards represent a clear step toward corporate activities grounded in a mindset of corporate social responsibility (CSR). They cover areas such as the environment, safety, compliance, the public good, and coexistence with stakeholders.

Unitika has aggressively worked on becoming certified under ISO 14001—the international standard for environmentally-aware corporate activities. All production sites due to become ISO 14001-certified had done so by May 2003. In FY 2003, we started activities to help our affiliates receive ISO 14001, and have been conducting environmental audits of each company.

Unitika’s Environmental Preservation Activity History

- **September 1973**: Created and implemented Environmental Preservation Regulations.
- **October 1991**: Revised Environmental Preservation Regulations, established Environmental Preservation Committee.
- **April 1993**: Created and implemented Global Environmental Charter.
- **May 1993**: Environmental Preservation Regulations were revised as Environmental Regulations. Established Environmental Committee, organization which meets annually.
- **May 1994**: Started environmental audits (once per year, voluntary audits by each production site and internal audits by headquarters staff.)
- **July 1996**: Created targets for first Medium-Term Environmental Plan (FY 1997 to 1999).
- **September 1996**: Started publishing Kurayoshi, our in-house newsletter on environmental issues.
- **October 1997**: Created and implemented Unitika Action Charter.
- **January 1998**: Started a process of becoming ISO 14001-certified at all major production sites.
- **January 1999**: Unitika Chemical was awarded ISO 14001 certification (first in Group).
- **October 2000**: Created targets for second Medium-Term Environmental Plan (FY 2000 to 2002).
- **April 2001**: Created Unitika Action Standards.
- **June 2002**: Published Unitika Environmental Report.
- **October 2002**: Created targets for third Medium-Term Environmental Plan (FY 2003 to 2005).
- **October 2005**: Created targets for fourth Medium-Term Environmental Plan (FY 2006 to 2008).

ISO 14001-Certified Unitika Organizations (as at March 31, 2006)

- **April 1999**: Asahi Co., Ltd.
- **November 1999**: Unitika Pructo Sakai Co., Ltd.
- **November 1999**: Unitika Sakaki Plant
- **January 2001**: Unitika Textiles Ltd., Tottori Mill
- **March 2001**: Unitika Uji Plant
- **March 2001**: Unitika Uji Plastic Plant
- **March 2001**: Unitika Central Research Laboratories
- **March 2001**: Unitika Fibers Ltd., Uji Plant
- **March 2001**: Unitika Glass Fiber Co., Ltd., Kyoto Plant
- **March 2001**: Unitika Environmental Technical Center Co., Ltd., Niihari Office
- **October 2001**: Unitika Okazaki Plant
- **October 2001**: Unitika Fibers Ltd., Okazaki Plant
- **October 2001**: Unitika Plant Engineering Co., Ltd., Chubu Office, and Business Division
- **October 2001**: Nippon Enter Co., Ltd., Okazaki Plant
- **October 2001**: Unitika Environmental Technical Center Co., Ltd., Chubu Office
- **December 2002**: Unitika Tani Mill
- **December 2002**: Unitika Textiles Ltd., Tani Mill
- **December 2002**: Unitika Plant Engineering Co., Ltd., Tani Group
- **December 2002**: Unitika Environmental Business Division
- **May 2003**: Unitika Textiles Ltd., Miyazawa Mill
- **December 2003**: Unitika Glass Fiber Co., Ltd., Tani Mill
Environment/Safety Management Organization

To implement CSR-driven environmental awareness and safety measures, we have established a management organization headed by the President, consisting of several committees and business divisions.

Unitika’s original environment/safety management organization consisted of three committees and business divisions. A new committee (the Corporate Action Committee) was added in 1998. The organization was again expanded in 2006, to encompass the Compliance Committee, becoming a driver of compliance promotion. The Compliance Committee and Central Committee on Product Liability are described in detail in the section on Unitika’s approach to compliance starting on page 6. The Environment Committee, one of the original committees, meets regularly every year. It discusses and votes on major environmental issues such as basic plans for environmentally-aware management, and verification of their progress. It contains the two subcommittees shown below. Specific topics are discussed and examined in detail conceptually and technically, providing the kernels of environmental measures.

The Central Safety and Sanitation Committee and the Environment Committee act as departments dedicated to safety and environmental measures, and have a higher level of authority in the Unitika hierarchy than the Environmental Safety Sections/Groups of Unitika production sites or affiliates. They form an organization that provides the leadership to implement effective environmental measures.

The Environment Committee contains the two subcommittees below.

1. Environmental Technology Subcommittee:
Works on (a) energy saving and (b) increasing the recycling rate, to find technology-based ways of reducing losses associated with business activities.

2. Environmental Preservation Subcommittee:
Sets goals for (a) reducing environmental impact and (b) reducing industrial waste, in line with environmental preservation laws and the Unitika Global Environment Charter. Works on efficient implementation of these goals.
Overview of Environmental Impact

Environmental Impact From Business Activities (FY 2005 Figures)

The Unitika Group is aware of the various types of environmental impact caused by our business activities, and we are working to obtain accurate data on its severity and on reducing it. The diagram below shows the Unitika Group’s inputs and outputs for FY 2005. The transfer and emission quantities of each chemical regulated by the PRTR (Pollutant Release and Transfer Register) Law are shown below.

PRTR (Pollutant Release and Transfer Register) is a system that requires companies to measure and report the quantities of chemicals emitted from their plants into the environment or transferred out as waste products. A PRTR law was put into effect in Japan in March 2000. Measurement, reporting and disclosure started with FY 2001 data.

<table>
<thead>
<tr>
<th>Chemicals requiring registration under PRTR Law: 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaldehyde</td>
</tr>
<tr>
<td>Antimony and its compounds</td>
</tr>
<tr>
<td>e-caprolactam</td>
</tr>
<tr>
<td>Ethylene oxide</td>
</tr>
<tr>
<td>Ethylene glycol</td>
</tr>
<tr>
<td>1,4-dioxane</td>
</tr>
<tr>
<td>Dichloromethane</td>
</tr>
<tr>
<td>Asbestos</td>
</tr>
<tr>
<td>Dioxins</td>
</tr>
<tr>
<td>Terephthalic acid</td>
</tr>
<tr>
<td>Toluene</td>
</tr>
<tr>
<td>Dichloropentafluoropropane</td>
</tr>
<tr>
<td>1,2-benzenebicarboxylic acid 1,2-anhydride</td>
</tr>
<tr>
<td>Boron and its compounds</td>
</tr>
<tr>
<td>Poly(oxyethylene) – alkyl ethyl</td>
</tr>
<tr>
<td>Poly(oxyethylene)</td>
</tr>
<tr>
<td>= nonylphenol ethyl</td>
</tr>
<tr>
<td>Bisphenol A</td>
</tr>
<tr>
<td>Bisphenol A epoxy resin</td>
</tr>
<tr>
<td>Hexamethylene diamine</td>
</tr>
</tbody>
</table>

The transfer quantities and emission quantities of chemicals have increased since the previous year, but we will continue to work on maintaining or reducing their environmental impact. We are stepping up work on setting voluntary reduction goals, investing in environmental preservation equipment, improving processes and optimizing operation.
Work on Reducing Environmental Impact (1)

The UNITIKA Group succeeded in greatly reducing environmental impact from atmospheric emissions of dust and SOx (sulfur oxides) in FY 2005, mostly the result of installing a gas cogeneration facility at our Uji Plant (one of our major plants) in October 2004. Both dust and SOx emissions fell greatly in FY 2005, with dust down 44% from the previous year (to 28 tons), and SOx down by half (to 186 tons). But NOx (nitrogen oxides) emissions were up 6.2% (to 1,144 tons), partly due to an increase in gas emissions from conversion to natural gas.

To step up measures to prevent air pollution, we are working on reducing emissions quantities by adding more gas cogeneration facilities, using more low-sulfur fuel, improving boiler efficiency and enforcing operation management that eliminates waste.

By enabling a switch from fuel oil C to environmentally-friendly natural gas as an energy source, cogeneration systems can greatly reduce SOx and dust, and save energy. A gas turbine cogeneration system fuelled by natural gas and providing a 15,000 kW generation capacity began operation in April 2006 at UNITIKA’s Okazaki Plant. By saving energy, it reduces CO2 and helps reduce environmental impact.
The COD emissions quantity for FY 2005 was down 9.9% from the previous year (to 234 tons), while the total waste water quantity was roughly the same (54.55 million tons). To enable reductions independent from factors such as production volumes, we will work on developing new technologies, improving management of emissions sources, and recycling and reusing cooling water.

We have met the 10% waste reduction target (from the FY 2001 level) set in our third Medium-Term Environmental Plan, reducing waste by as much as 1,218 tons (16.2%) from the previous fiscal year. This success can be ascribed to the waste sorting and collection programs put in place at each Unitika production site, and other improved waste reduction efforts.

The rate of recycling has generally been dropping relative to FY 2001 (the comparison year), but picked up somewhat starting in FY 2004. This fiscal year, the rate increased 1.7 percentage points from the year before, to 91.4%. We are more strongly committed to working on waste reduction, and plan to step up our thermal recycling using waste plastics.
The signing of the Kyoto Protocol has brought the urgency of global warming prevention work to the attention of the world. Production sites need to reduce CO₂ and other greenhouse gases, and take further steps to save energy.

To work toward these goals, Unitika takes precise measurements of CO₂ emissions quantities, energy consumption quantities and energy unit requirements.

Our Medium-Term Environmental Plan targets an energy consumption reduction of 10% by 2010 (compared to the FY 1990 level). We had already achieved a 23% reduction in FY 2005, a major cutback that greatly helps reduce CO₂ emission. This success is mainly the result of reducing production quantities throughout the Group, steady energy-saving activities, process improvements, heat recovery and water reuse. Our energy unit requirement in FY 2005 was worse than the previous year, mainly due to a drop in production, and to model diversification that altered the relative quantities of each brand produced.

We will continue to work on preventing global warming from an all-encompassing perspective, examining various indices throughout the manufacturing process.

To reduce the environmental impact of transportation needed for inputs of raw materials and outputs of products and waste products, Unitika implements the four distribution guidelines on the right. These guidelines have helped us make across-the-board improvements in transportation efficiency, and in reducing energy consumption and emissions gases.

In line with an April 2006 revision to Japan’s laws pertaining to rationalized energy consumption, we have started energy-saving initiatives for distribution.

1. We will shorten transport distances by lending, borrowing or swapping general-use products or materials of equal quality with other companies.
2. Within Japan, we will use container transport by sea or rail whenever possible, since these methods enable mass transport and are energy-efficient.
3. Forklifts used for work inside sites will be changed from engine-driven models to environmentally-friendly battery-driven models with zero emissions gases and low noise.
4. We will reduce transportation energy consumption by using flexible containers that can wrap larger numbers of products instead of paper bag wrapping materials, and by shaping containers for more efficient truck loading.
Technology and Products for Environmental Safety (1)

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Water Treatment Facilities

- Water supply facilities
- Water supply membrane filtration equipment
- Advanced water supply treatment facilities
- Sewage facilities
- Advanced sewage treatment facilities
- Granular desphosphorizing equipment
- Agricultural community waste water treatment facilities
- Fishery community waste water treatment facilities
- Seepage water treatment facilities in final disposal sites
- Waste water treatment facilities in garbage incinerators
- Industrial waste water treatment equipment
- Sewage treatment equipment
- Sludge reduction equipment
- Sludge composting equipment

Improved Combined Sewerage Treatment System

Since large volumes of combined sewage flow into sewage treatment sites in a short time when it rains, the sites can’t treat it fast enough, and untreated sewage is released into rivers or other waterways. To solve this problem, Unitika has developed an improved combined sewerage treatment system driven by our Marimo high-speed filtration system, enabling rapid and stable treatment over short amounts of time. It efficiently performs variable high-speed filtration on top/bottom counter-currents, providing high treatment capacity in rain or shine. It removes pollutants at a filtration rate of up to 2,000 m³/day in rain, and at a standard rate of 1,000 m³/day in clear weather. It is a high-performance system offering stable treatment capacity at a low cost.

Marimo High-Speed Filtration System

Marimo is a high-speed filtration system developed by Unitika that offers high performance and uses a special fiber as the filtration material. Marimo’s high-speed function provides a filtration rate five times faster than conventional sand filtration systems. Offering a significantly higher level of treatment efficiency, it enables easy cleaning and draws on Unitika’s many years of expertise as a fiber manufacturer. Marimo is used in a wide range of applications in tertiary waste water treatment, waste water reuse, industrial water filtration, and manufactured water pretreatment.

Sludge Reduction Equipment

To enable the type of sustainable industrial processes that will ensure the future of mankind and our planet, Unitika has developed equipment to reduce the volume of sludge generated when treating biological materials. The equipment continuously mills the excess sludge generated in biological material treatment tanks using fine ceramic beads. When the milling has solubilized the sludge, it is fed back into the biological material treatment tank to biodegrade.

Biological Contact Filtration Facility

A clean water facility that uses spherical carriers of polyester fiber as the filtration material. Biological membranes form on the surface of the filtration material, and microbes such as nitrifying bacteria and iron oxidizing bacteria propagate within the filter layer. The biological purifying properties of these microbes efficiently remove ammoniacal nitrogen, iron and manganese. The facility can fit within a small footprint and has a high pure water treatment capacity.

Phosnix Granular Desphosphorizing System

A system that recovers phosphorus in waste water as granules of magnesium ammonium phosphate (MAP), a substance that can be effectively used as a fertilizer.
Technology and Products for Environmental Safety (2)

Garbage Processing Facilities

- Stoker incinerators
- Fluid-bed incinerators
- Gasifying-melting furnaces
- Incineration residue melting furnaces
- Garbage crushing and sorting facilities
- RDF (refuse-derived fuel) facilities
- Exhaust gas treatment equipment
- Fly ash treatment equipment
- Regenerative-heat deodorizing equipment

Next-Generation Stoker Incinerator: Uniburn System 21

Unitika started constructing city garbage incineration facilities in 1971, and has now built 90 facilities. Uniburn System 21 is a next-generation city garbage incineration system that draws on these many years of experience, developed with the aid of German technology for stoker incinerators with boilers. Its low air ratio and high combustion temperature improve the heat recovery rate and enable significantly cleaner exhaust gas. These features reduce environmental impact and lower total garbage processing cost.

Advanced-Function Incineration Residue Melting System: Unimelt System 21

Developed as the result of our research on reducing and cleaning incineration residue, the Unimelt System can melt incinerator ash, fly ash, incombustible residue left after processing bulk garbage, or incombustible residue mixed in with combustible residue. Waste plastic that previously couldn’t be reused can be melted together with other garbage, making the system effective for plastic thermal energy applications. Unimelt is a revolutionary system that enables residue to be cooled into slag after melting, for effective use as a construction material. Unimelt can also melt items processed at landfill disposal sites, enabling recycling at those sites.

Air Pollution

- Deodorizing equipment
- Dust collection equipment
- Soil surveys/analysis
- Soil pollution cleanup measures
- Pollution cleanup measures
- Pharmaceutical products, reins, filtration materials

Environmental Surveys, Measurement and Analysis: Unitika Environmental Technical Center Co., Ltd.

Unitika Environmental Technical Center (UETC) uses the latest equipment and technology to carry out environmental surveys, measurement and analysis, along with various investigations needed by several industries. UETC is certified by Japan’s Ministry of the Environment as a qualified contractor for dioxin analysis, and has gained a reputation for solid reliability. To enable more accurate analysis, UETC can analyze trace amounts of dioxins. It is highly experienced in soil surveys (a recent area of concern in Japan), and has measures to combat soil and groundwater pollution permanently. UETC also helps protect living environments through activities such as sick building surveys; air quality, weather, noise and vibration measurements; technical support for water treatment; exhaust gas, odor and work environment measurements; and analysis of river water, waste water, drinking water, asbestos, and insulation oil trace PCBs.
The demand for PET bottles is steadily increasing, and 509,000 tons* of PET bottle resin was produced in FY 2004. Reflecting this increase, the rate of waste PET bottle recovery has risen to 62.3%. As part of our efforts to preserve the environment, Unitika has been active in PET bottle recycling. Uniecolo was developed by drawing on our outstanding existing fiber forming technology. Offering soft texture and good body, it is an environmentally-aware fiber with the same features as conventional polyester, and designed to enable reuse of limited resources.

*According to figures from The Council for PET Bottle Recycling.

Uniecolo

Sylph

Sylph is a plant fiber created from natural pulp. The raw material is pulp from trees, which undergoes an advanced chemical treatment in the manufacturing process. Sylph is a new natural fiber, a material midway between natural and manmade—a natural material controlled by human technology. It generates no harmful waste products during the raw stock manufacturing process, and the raw material is harvested through planned felling of fast-growing trees, to minimize environmental impact. The environmental protection Sylph enables is an apt symbol for ideal coexistence between man and nature.

Fiber category

- Natural fibers
  - Cotton, hemp, others
- Recycled cellulose fibers
- Semi-synthetic cellulose fibers
- Acetate, triacetate, others
- Viscose, others
- Plant fibers
- Recycled synthetic fibers
- Semi-synthetic synthetic fibers

Recycling/manufacturing process not generating harmful substances

Sylph
Technology and Products for Environmental Safety (4)

Recycled Polyester Nonwoven Sheeting

Ecomix
Since recycling is an important part of our environmental preservation efforts, Unitika has developed, by outstanding existing spunbond technology, a polyester filament nonwoven fabric called Ecomix, made from scraps of PET bottles or nonwoven fabric products. Ecomix has already received the Japan Environment Association’s Eco Mark certification (No. 00105029). With outstanding water permeability and endurance, Ecomix has been permitted for a wide range of public works applications, including protective mats for water barrier sheets in waste disposal sites, sheets for erosion and torrent control in banking reinforcement construction and harbors, suction-preventing sheets for riverbank protection, and plastic board drains. With its cost-effective wide sheets and highly elastic structure, Ecomix can easily handle warping and projections, and is gaining popularity as sheeting for today’s needs.

Anticorrosive Sheeting

Segurova
Japan’s River Law was partially revised in June 1997, and in line with the new law, Unitika Fibers developed Segurova, an anticorrosive sheeting material designed to blend in with natural environments and landscapes. Manufactured using a 3-D weaving technology to ensure that gaps and thicknesses are kept constant, Segurova resists water currents, and provides high corrosion resistance. Designed for weather resistance and endurance, it is mainly comprised of black dyed-in-the-fiber polyester monofilament. To give some components partial dimensional stability, they use binder fibers with a core and pod structure. The sheet top and bottom layers have a honeycomb structure for easy filling with earth or sand. Segurova can be used in embankment protection works to reinforce the corrosion resistance of herbaceous plants such as lawns or seedlings. It stops corrosion from water currents from embankment surfaces and river banks, enabling a new anticorrosion sheeting-based construction method. Segurova has already become the first product in the industry to be awarded the Public Works Research Center’s Anticorrosion Sheet Performance Evaluation Certification (certification No. 0001).
Plant-Derived Biomass Material

Terramac

Terramac is a biomass material made from a polymer derived from plants such as corn. Biomass materials are organic resources derived from recyclable biological sources, which don’t use any fossil fuel resources. Terramac ultimately degrades into carbon gas and water, which are absorbed by plants such as corn, and in turn can be turned into Terramac again. So Terramac is part of the natural world’s original ‘recycling system’. Conventional plastic products are made from oil, a limited and non-recyclable raw material that will run out in the not-so-distant future if we continue using it. Terramac is now an extremely promising alternative. It has a wide range of applications in clothing, eating utensils, cups, wrapping films, cosmetic bottles, teabags, planters, trash bags and all areas of consumer demand. Unitika was the first company in the world to develop products derived from polyactic acid (the base of Terramac), when we succeeded in producing foamed plastic containers and food containers able to hold hot water and be microwaved. Adding kenaf fiber (derived from plants) to Terramac greatly improves its heat resistance. In fact, one of its applications is in mobile phone casings. Combining the natural advantages of plant material with human technology, Terramac is an attempt to create the ideal material for both the planet and its human inhabitants.

Terramac is extremely safe for human health and the environment.

<table>
<thead>
<tr>
<th>Biodegradability:</th>
<th>JIS K6953 (ISO 14855)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Passes the test of beneficial and extreme biodegradability and destructibility under controlled compost conditions.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Labeling, certification standard:</th>
<th>Conforms to GreenPlaÆ Identification and Labeling System/certification standard set by Biodegradable Plastics Society (BPS). (Has been placed on Positive List, and been certified with the GreenPlaÆ Mark.)</th>
</tr>
</thead>
</table>

|------------------|----------------------------------------------------------------------------------------------------------|

<table>
<thead>
<tr>
<th>Bacterial resistance:</th>
<th>Polylactic acid has been reported to have antibacterial properties. (Bokin bobai, Vol. 29, No. 3, pp. 153 to 159, 2001)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Low combustion heat:</th>
<th>Low combustion heat of approximately 4,500 kcal/kg (same as paper) is one-half to one-third the value of oil-based plastic, so cannot harm incinerators. Does not generate toxic gases (dioxins, hydrogen chloride, NOx or SOx) when incinerated.</th>
</tr>
</thead>
</table>

Can be used for these applications.

- Mobile phones
- Microwaveable utensils
- Window envelopes
- Utsnel trays

Polyactic acid uses® PLA.

* NatureWorks® and the EcoPLA design are registered trademarks of NatureWorks LLC.

Technology and Products for Environmental Safety (5)
Environmental Accounting

To step up our work on environmental preservation, we compile and release environmental accounting using data highly transparent to the public.

Unitika’s environmental investment for FY 2004 was 180 million yen, spent mainly on preventing pollution and raw material recycling. Environmental expenses were 2.11 billion yen, mainly waste processing (including recycling expenses), maintenance and management of equipment to prevent pollution, and product R&D for environmental preservation. We use the guidelines released by the Ministry of the Environment in May 2005 when calculating environmental accounting data, using the Environmental Guidebook put out by the Ministry in March 2001 as a reference. Unitika will continue to release clear and accurate environmental accounting data.

The table on the right illustrates economic effects by listing items with a clear basis for calculation, that have high substantive benefits for environmental preservation. The expenses saved from energy saving, waste reduction and resource recycling have been calculated in comparison to the previous fiscal year. Note that inferred benefits have not been calculated, such as savings to the public from environmental preservation efforts.

### Environmental Costs

<table>
<thead>
<tr>
<th>Category</th>
<th>Capital Invest</th>
<th>Cost</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pollution prevention costs</td>
<td>161</td>
<td>666</td>
<td>Pollution (water, air and noise pollution) prevention measures</td>
</tr>
<tr>
<td>Environmental preservation</td>
<td>0</td>
<td>19</td>
<td>Energy saving, global warming prevention</td>
</tr>
<tr>
<td>Resource recycling costs</td>
<td>14</td>
<td>817</td>
<td>Waste disposal, recycling</td>
</tr>
<tr>
<td>Packaging material recycling</td>
<td>0</td>
<td>141</td>
<td></td>
</tr>
<tr>
<td>Gaining environmental</td>
<td>6</td>
<td>94</td>
<td>Gaining environmental system certification, environmental education, impact monitoring</td>
</tr>
<tr>
<td>management costs</td>
<td>0</td>
<td>301</td>
<td>Developing environmentally-friendly products</td>
</tr>
<tr>
<td>Forestation improvements</td>
<td>0</td>
<td>44</td>
<td>Forestation improvements, beautification campaigns</td>
</tr>
<tr>
<td>Quantity-based tax on</td>
<td>0</td>
<td>29</td>
<td>Quantity-based tax on environmental impact of SOx emissions</td>
</tr>
<tr>
<td>environmental impact of SOx emissions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>181</td>
<td>2,111</td>
<td></td>
</tr>
</tbody>
</table>

### Economic Effects

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction in energy expenses</td>
<td>72</td>
</tr>
<tr>
<td>Waste reduction</td>
<td>9</td>
</tr>
<tr>
<td>Income from sale of recycled resources</td>
<td>207</td>
</tr>
</tbody>
</table>
Unitika’s personnel system is designed to encourage employee self-actualization. We provide equal employment and work opportunities, and make every effort to create accommodating workplace environments.

Personnel Evaluation System
Unitika’s personnel evaluation system emphasizes employee effort, and is designed to increase the organization’s vitality. It is a results-driven system that awards greater benefits to employees who achieve greater success or tackle more difficult challenges. A biannual goal management system and annual competency evaluation system are used along with our human resources development program. They impartially evaluate how well each employee is meeting their goals, and help them set new goals to develop their abilities. Supervisors meet with each employee to discuss their evaluation results, ensuring that everyone receives proper feedback, for better transparency and communication.

Self-Reporting System
Once a year, at the time of the annual personnel evaluations, employees submit a report sheet to their supervisor to self-report how much aptitude they feel they have for their position. The report covers three main areas: (1) the employee’s aptitude for their current position, (2) what position the employee would like to be posted in, and (3) whether the employee would like to be sent overseas. The employee enters their self-evaluation and preferences, and the supervisor evaluates each item and adds comments. The Personnel/General Affairs Department uses supervisor comments to ensure suitable job placements, aided by discussion with department heads. When needed, the Personnel/General Affairs Department consults employees to ensure their wishes are also taken into consideration.

Rotation System
Unitika is aware of the importance of job rotation in fostering outstanding human resources. Our practice of periodic job rotation (especially for young employees) helps employees improve their abilities by giving them the opportunity to work in several departments, and helps us spot candidates to fast-track.

Women Employees
Unitika’s women employees are valued for their abilities and perspectives. We hire a large number of female employees and have no gender-biased hiring or promotion policies. For the past five years, women have accounted for 15% of the college graduates we have hired, and several women employees have risen to management positions.

Rehire System
Unitika has a senior employee system that enables employees to continue in the same job after reaching the age of 60. We welcome employees who want to continue working, and in FY 2005, our rehire rate was 42.3%.

Number of Employees Taking Childcare or Caregiver Work Leaves
To enable female employees to balance work and family, and respond to the needs of Japan’s aging society, Unitika allows work leaves for childcare or other caregiving. The system is open to both sexes, and male employees have been taking childcare work leaves since FY 2003.

<table>
<thead>
<tr>
<th>Year</th>
<th>Childcare Leave (Female)</th>
<th>Childcare Leave (Male)</th>
<th>Caregiver Leave (Female)</th>
<th>Caregiver Leave (Male)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2001</td>
<td>26</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>FY 2002</td>
<td>24</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>FY 2003</td>
<td>25</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>FY 2004</td>
<td>27</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>FY 2005</td>
<td>17</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Concern for Our Employees (2)

Unitika believes that raising the ability of each employee in the organization is crucial for achieving outstanding business goals. Human resource development is therefore an important focus for us. We approach it through two areas—our personnel system that sets forth employee work conditions and evaluation methods, and systems to encourage ability growth, such as ability development and training systems. Unitika Training Center is the dedicated training center we have created to implement our approach. It is used for several different types of training taken by a large number of employees. To help employee self-improvement efforts, Unitika offers a job qualification assistance system, correspondence courses, and full-time study courses at universities in Japan. Many of our highly-motivated employees are eager to take advantage of these benefits.

Since Unitika feels that mental health is an increasingly important issue for employees as they move up the corporate ladder, every Unilika employee undergoes mental health training when they are promoted to a management position. We encourage managers to be aware of their managerial role and to take care of their own mental health. We hold specialized training sessions given by outside specialists such as psychology consultants and health counselors. The employee support system was established with guidance and support from outside mental health experts. In-house doctors are also available for early treatment counseling.

The entire Unitika Group is an active advocate of human rights, and has appointed a director in charge of supervising all employee human rights issues. This director oversees the Companywide Human Rights Education Committee, and there are Workplace Human Rights Education Committees at each Unitika production site to implement the Committee’s mandates. Unitika is also a member of the Osaka Social Integration/Human Rights Issues Corporate Communication League, so deals with a wide range of human rights issues. Sexual harassment is another issue that we take very seriously. We have set up a Sexual Harassment Committee and consultation office, and take steps to raise the awareness and recognition for the problem among all employees.

Training System (Program) and Number of Students (FY 2005)

- Training for individual levels (424 students)
  1. Training for promoted employees (182 students)
  2. Young employee education (242 students)
    - New employee training, basic knowledge course, manufacturing department leader development course

- Specialized education (178 students)
  1. Competency improvement training
    - Strategic management game training, better business negotiation training, business coaching training, solution management training, better technical development and planning training, legal training, logical communication
  2. On-the-job development education
    - Supervisor training, business leader training

Makeup of Human Rights Education Committee

- Director in charge of all employee human rights issues
- Human Rights Education Advisory Committee
- Companywide Human Rights Education Committee
- Workplace Human Rights Education Committee
Giving Back to the Community

UNIKA Group
Corporate Social Responsibility Report 2006

Giving Back to the Community

Local Environmental Improvement

An environmental preservation council run by the major corporations in the city of Ako in Hyogo Prefecture holds a cleanup campaign around the Chigusa River as part of its environmental aid measures. The Sakoshi Plant helped in the campaign, taking part in the cleanup with employees from other corporations on October 25, 2005.

Other UNIKA production sites are also working on beautifying their surrounding environments. About 150 employees of the Okazaki Plant took part in a local volunteer program to clean up the area around the plant on a Saturday in March 2006.

In 2003, UNIKA Union celebrated its 30th year in business by starting a program called Midori no Plan ('Green Plan') designed to give back to the community and raise environmental consciousness. Midori no Plan volunteers created a wooded area they named UNIKA no Mori ('UNIKA Wood'). Three species of local trees (sawtooth oak, quercus serrata, Japanese cypress) were planted in a two-hectare area of mountain forest in Hidakagawa-cho (Wakayama Prefecture). Employees visit the area to cut back the undergrowth several times per year. In September 2005, twenty-five employees performed this task to enable better tree growth, and took part in a "Forest Patrol" workshop on the importance and splendor of the woods. In April 2006, bracken was picked from UNIKA no Mori, letting a large number of employees enjoy the wood's growth.

Responding to Japan's increasing focus on public-spirited volunteer projects, we established a volunteer foundation in 1992 and began a range of activities inside and outside the Company. In Japan, we have held support activities in facilities for the handicapped and conducted training meetings to expand the frontiers of volunteer activities. We have also worked to step up volunteer activities overseas, where we have sent volunteers to work camps for international exchanges, and have raised money for disaster relief.
Giving Back to the Community

PR Activities

Expo 2005, Japan’s largest exposition in 2005, featured a large amount of biodegradable utensils and canvas for venue information boards made of our Terramac biodegradable material. While many visitors no doubt didn’t notice the Terramac product name, the exposition gave many people the chance to use handy utensils and trays made of the biodegradable material.

Many types of experimental verification work on environmentally-friendly products and methods were carried out inside the venue during the exposition, and Terramac was given the mission of aiding them. Researchers examined sorting methods for returnable utensils derived from biomass, and checked how easily the utensils became damaged. Damaged items were composted. The verification work provided useful data for helping advance Japan’s recycling infrastructure. The Unitika department responsible for Terramac took part in this work at the preview before the main exposition.

Since Terramac products couldn’t be sent to the composting experiment if PET or polystyrene containers were mixed in with them, the department helped with the sorting and recovery work done during the preview, then aided the research on recovery methods so that experimental verification could continue.

Terramac, Unitika’s durable plant-derived plastic material, has won the Ecology category of the Nikkei BP Technology Award.

Terramac is manufactured by using proprietary technology to reform polylactic acid derived from plants such as corn, and then introducing an additive to promote crystallization. It dramatically increases the heat resistance attainable from plant-derived plastics from 60 to 120˚C. It improves shock strength and bending elasticity, and expands the range of applications possible for plant-derived plastics. Terramac was highly rated for these characteristics.

The Nikkei BP Technology Award is usually awarded to technologies designed to help or preserve the global environment or a local environment, or contribute to reducing environmental impact.

Terramac molded products used at the exposition

Terramac Wins Ecology Category of 16th Nikkei BP Technology Award (2006)

Terramac was highly rated for these characteristics.

The Nikkei BP Technology Award is usually awarded to technologies developed in Japan that have been featured at some time in the past year in a Nikkei Business Publication magazine or Web publication. The award in the Ecology category is awarded to technologies designed to help or preserve the global environment or a local environment, or contribute to reducing environmental impact.

Nikkei BP Technology Award Ceremony held on April 7, 2006 at Hotel Okura in Tokyo. From left: Head Researcher Fumio Matsuoka, Senior Advisor Masatsugu Mochizuki, Section Head Norio Fukawa and Group Head Kazuo Ueda from Unitika, and Research Department Head Masahiro Iji and Manager Makoto Onoizawa from NEC.
Unitika has created an organization well-equipped to prevent production accidents and accidents damaging surrounding areas. In addition to these basic measures, we are also active in training activities to prepare for accidents and natural disasters.

### Disaster-Readiness Activities

Unitika’s internal standards used to enforce safety management at production facilities are a set of guidelines for prior evaluations of new equipment safety/sanitation and environmental soundness. These standards are used to prevent disasters when installing or renovating equipment, and call for two rigorous inspections—once during the design phase, and once at completion. While production sites using boilers or pressure containers require yearly statutory inspections, inspections need only be carried out once every two years if a proper voluntary management system is in place as approved by the Ministry of Economy, Trade and Industry. Unitika’s Uji Plant and Okazaki Plant have received approval for these biannual inspections.

On March 2, 2006 at the Uji Plant, a joint firefighting training session was held with about 100 participants from the Uji Fire Department, Osaka Gas Group and Unitika Group. The training dealt with a hypothetical accident in which gas leaked from the outlet pipe of gas compressor No. 1 in the gas turbine generator, causing a fire from an unknown ignition source that results in a single victim. Participants were able to check how well they performed a series of actions set forth in the emergency manual, including discovering the fire; reporting and communicating the situation; evacuation guidance, head counts and reporting; saving victims; reporting to Gas and Power Investment’s Osaka headquarters, and initial fire extinguishing. When the Uji Fire Department arrived, participants worked with them to save one victim, then ended the session by giving a series of reports. The Okazaki Plant held a similar Plantwide training session on November 17, 2005, spraying water on a hazardous material storage tank to extinguish a fire.
UNITIKA Group
Corporate Social Responsibility Report 2006

Giving Back to the Community

Unitika is aware of the fundamental role that safety and health play in business activities, and we hold Groupwide safety and health management activities to prevent work disasters.

Safety and Health Activities

To raise employee safety awareness, Unitika creates medium-term (three-year) safety and health plans that we have been implementing since 1969, and we started holding yearly Groupwide safety and health conferences in 1974. Our latest medium-term plan (the 13th) runs from 2005 to 2007. It calls for research on the creation of a safety and health management system, and targets complete eradication of potential hazards (zero hazards) through substantive safety improvements and ongoing risk assessments. The plan's mental health measures include inviting psychiatrists to give presentations at our safety and health conferences, and mental health training sessions for management-level employees given by industrial counselors. As a corporate risk management measure, we have also started an employee assistance program (EAP) open to all employees and their families, providing them with health management services.

Unitika had zero work leaves in FY 2005, and we will make further improvements on our safety and health activities to maintain this perfect record.

Unitika’s Basic Policy for Safety and Health

1. Ensuring safety and health is the foundation of many types of business activity.
2. Ensuring safety and health is the most important obligation of executives and managers at each level of the corporate hierarchy.
3. All employees shall take part in activities for ensuring safety and health.
4. We shall comply with all relevant labor safety and sanitation laws and workplace safety and health standards to ensure safety and health.
5. We shall implement an ongoing safety and health management system to ensure safety and health.
Production Site Information (1)

**Uji Plant**
Location: 5 Uji-Tonouchi, Uji-shi, Kyoto, Japan 611-0021  
Site area: 348,292 m²  
ISO 14001: Certification No. JCQA-E-0058, Certification No. JCQA-E-0249  
Main products: Nylon resin, nylon fiber, engineering plastics, nylon/polyester film

**Okazaki Plant**
Location: 4-1 Hinokita-machi, Okazaki-shi, Aichi, Japan 444-8511  
Site area: 315,480 m²  
ISO 14001: Certification No. JCQA-E-0292  
Main products: Polyester resin, polyester fiber, spunbond (filament nonwoven fabric), medical equipment, environmental business

**Toyohashi Office**
Location: 101 Matsunami, Akebono-cho, Toyohashi-shi, Aichi, Japan 441-8527  
Site area: 270,804 m²  
Main products: Nonwoven fabrics (sheeting for civil works and roofing applications), biobusiness (cauliflower mushroom: Sparassis crispa)

**Tarui Mill**
Location: 2210 Tarui-cho, Fuwa-gun, Gifu, Japan 503-2121  
Site area: 156,224 m²  
ISO 14001: Certification No. JCQA-E-0323  
Main products: Cotton nonwoven fabrics, glass cloth
Production Site Information (2)

### Miyagawa Mill

**Location:** 341 Honmachi, Obata-cho, Ise-shi, Mie, Japan 519-0593  
**Site area:** 103,404 m²  
**ISO 14001:** Certification No. JCQA-E-0476  
**Main products:** Yarn and woven fabric made from wool and wool blended materials  
**Site manager:** Hitoshi Yamaguchi

### Sakoshi Plant

**Location:** 88 Nakahara, Sosha-shi, Okayama, Japan 719-1195  
**Site area:** 175,520 m²  
**ISO 14001:** Certification No. JCQA-E-0093  
**Main products:** 100% cotton yarn, Blended yarn with synthetic & cotton, Synthetic woven fabrics blended with cotton  
**Site manager:** Hirokazu Yoshida

### Tokiwa Mill

**Location:** 88 Nakahara, Sosha-shi, Okayama, Japan 719-1195  
**Site area:** 175,520 m²  
**ISO 14001:** Certification No. JCQA-E-0093  
**Main products:** Vinyon fiber (for industrial materials such as cement, rubber reinforcements, tatami thread and papermaking binders)  
**Site manager:** Hiroshi Noguchi

### Union Co., Ltd.

**Location:** 10-1 Ohmine-Minami, Hirakata-shi, Osaka, Japan 573-0145  
**Site area:** 6,886 m²  
**Main products:** Glass beads  
**President:** Yoshiki Shimizu

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**Note 1:** The displayed regulation values are the most rigorous values mandated by law (Air Pollution Control Law or Water Pollution Control Law), regulations, prefectural guidance or conventions.  
**Note 2:** Includes environmental impact from affiliates within site.  
**Note 3:** SOx = sulfur oxides, NOx = nitrogen oxides, COD = chemical oxygen demand, BOD = biological oxygen demand  
**Note 4:** The displayed air pollution values are the measured values for the major facilities at each site (totals are values for entire site).  
**Note 5:** The displayed water pollution values are the highest values measured at the drain outlets at each site (load amounts are values for entire site).