2007 GLOBAL CITIZENSHIP REPORT

Enhancing Global Sustainability Through Excellence
Sigma-Aldrich

Global Citizenship

Our Global Commitment to Social Responsibility, Environmental Sustainability, and Fiscal Accountability is creating a new level of collaboration with our employees, customers, and the communities where we work and live.

Sigma-Aldrich has a long tradition of applying process improvements to our operations and working environment. We realize millions of dollars in savings annually due to the process improvements our employees implement worldwide. This tradition is now being employed to integrate sustainable development programs into every facility. We support the principles contained within the UN Global Compact, and we will strive to support and respect the protection of international human rights within our sphere of influence.

SOCIAL RESPONSIBILITY
Sigma-Aldrich also has a rich history of corporate commitment. A part of that heritage is a legacy of giving back and actively seeking to inspire others by being generous. Our employees participate in their communities in many different ways. To better organize our efforts and effectively engage our communities, the Company started the Sigma-Aldrich Foundation and has taken aggressive steps forward through the creation of “Team Sigma-Aldrich,” the newest outlet for corporate responsibility and an avenue for employees to give back to our community.

ENVIRONMENTAL SUSTAINABILITY
We’re meeting society’s needs for products and services with progressively less negative impact on the world. Our Worldwide Sustainable Development Committee is responsible for the evaluation and direction of sustainable development programs. We believe our initiatives will promote greater environmental responsibility and support energy conservation, natural resource conservation, material reuse, and recycling, and the application of green chemistry into even more of our processing operations worldwide. We look forward to evaluating opportunities to partner with our customers in these important areas, and we will encourage our suppliers to continually improve their supply operations in support of a healthier and cleaner environment.

FISCAL ACCOUNTABILITY
We strive to provide a high standard of behavior, along with unquestionable integrity. Continued honest and ethical business conduct is a cornerstone of our One Company values. Our Business Conduct Policy provides a foundation for good judgment when faced with choices of ethics and conduct. We will work against corruption in all forms. As a public company, it is of critical importance that the Company’s filings with the Securities and Exchange Commission be accurate and timely.

JAI NAGARKATTI
President and Chief Executive Officer

Sigma-Aldrich has a long tradition of applying process improvements to our operations and working environment. We realize millions of dollars in savings annually due to the process improvements our employees implement worldwide. This tradition is now being employed to integrate sustainable development programs into every facility. We support the principles contained within the UN Global Compact, and we will strive to support and respect the protection of international human rights within our sphere of influence.

SOCIAL RESPONSIBILITY
Sigma-Aldrich also has a rich history of corporate commitment. A part of that heritage is a legacy of giving back and actively seeking to inspire others by being generous. Our employees participate in their communities in many different ways. To better organize our efforts and effectively engage our communities, the Company started the Sigma-Aldrich Foundation and has taken aggressive steps forward through the creation of “Team Sigma-Aldrich,” the newest outlet for corporate responsibility and an avenue for employees to give back to our community.

ENVIRONMENTAL SUSTAINABILITY
We’re meeting society’s needs for products and services with progressively less negative impact on the world. Our Worldwide Sustainable Development Committee is responsible for the evaluation and direction of sustainable development programs. We believe our initiatives will promote greater environmental responsibility and support energy conservation, natural resource conservation, material reuse, and recycling, and the application of green chemistry into even more of our processing operations worldwide. We look forward to evaluating opportunities to partner with our customers in these important areas, and we will encourage our suppliers to continually improve their supply operations in support of a healthier and cleaner environment.

FISCAL ACCOUNTABILITY
We strive to provide a high standard of behavior, along with unquestionable integrity. Continued honest and ethical business conduct is a cornerstone of our One Company values. Our Business Conduct Policy provides a foundation for good judgment when faced with choices of ethics and conduct. We will work against corruption in all forms. As a public company, it is of critical importance that the Company’s filings with the Securities and Exchange Commission be accurate and timely.

JAI NAGARKATTI
President and Chief Executive Officer
We are pleased to present our 2007 Global Citizenship Report – the first of its kind for our Company. Our customers, investors, and employees are interested in learning more about our impact on the environment and the benefits we bring to the community. No longer is financial success the only criteria used to measure a company. This report is just one way to fulfill our commitment to communicating such important information.

We are proud to report our safety performance over the last decade and communicate our plans to harmonize recycling activities. In addition, we share green chemistry and technology internally and with our customers and investors, as well as announce a worldwide energy reconnaissance effort that we believe will be the cornerstone of engineering evaluations necessary to design and target energy conservation projects.

We are privileged to highlight the sincere and active volunteer efforts of our employees who have made positive impacts in the communities where we live and work. This spirit of giving has long been a part of the Sigma-Aldrich history, and it will continue to be a large part of our future.

TIMOTHY VENVERLOH
Director, Sustainable Development
Global Citizenship and Sustainable Development

By the Numbers

**Products**
Leading the way in the life science and high technology markets.

**Customers**
Approximately one million individual customers worldwide in over 80,000 accounts.

**Revenue**
Enhancing our global reach through excellence.

**Portfolio**
Four customer-centric business units delivering quality and service everyday.

### Volume of Sales
$ Billions

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume of Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>2.039</td>
</tr>
<tr>
<td>2006</td>
<td>1.798</td>
</tr>
<tr>
<td>2005</td>
<td>1.667</td>
</tr>
<tr>
<td>2004</td>
<td>1.409</td>
</tr>
<tr>
<td>2003</td>
<td>1.238</td>
</tr>
</tbody>
</table>

### Corporate Safety Performance
Number of Injuries – Recordable Injury Rate

<table>
<thead>
<tr>
<th>Year</th>
<th>Injury Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>0.94</td>
</tr>
<tr>
<td>2006</td>
<td>0.99</td>
</tr>
<tr>
<td>2005</td>
<td>1.10</td>
</tr>
<tr>
<td>2004</td>
<td>1.38</td>
</tr>
<tr>
<td>2003</td>
<td>1.09</td>
</tr>
</tbody>
</table>

### Energy Use*
Million kwh

<table>
<thead>
<tr>
<th>Year</th>
<th>Energy Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>179.3</td>
</tr>
<tr>
<td>2006</td>
<td>141.9</td>
</tr>
</tbody>
</table>

*Not all sites reporting. See page 10 for more information on our energy use.

### Emissions of Total Greenhouse Gases*
Million Tonnes CO₂ eq

<table>
<thead>
<tr>
<th>Year</th>
<th>Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>0.13</td>
</tr>
<tr>
<td>2006</td>
<td>0.11</td>
</tr>
</tbody>
</table>

*Not all sites reporting. See page 10 for more information on our carbon emissions.

### Volume of Quality System Implementation*
Number of Facilities Worldwide (ISO 9000)

<table>
<thead>
<tr>
<th>Year</th>
<th>Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>61</td>
</tr>
<tr>
<td>2006</td>
<td>61</td>
</tr>
<tr>
<td>2005</td>
<td>53</td>
</tr>
</tbody>
</table>

*For a detailed list of registered facilities please visit sigma-aldrich.com

### Water Use
Million m³

<table>
<thead>
<tr>
<th>Year</th>
<th>Water Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>3.34</td>
</tr>
<tr>
<td>2006</td>
<td>2.15</td>
</tr>
</tbody>
</table>

*Not all sites reporting. See page 10 for more information on our water use.
Sigma-Aldrich is committed to serving our communities. We are committed to a safe and fair work environment where our employees can grow and immerse themselves in the diversity that Sigma-Aldrich offers.

Sigma-Aldrich and the Sigma-Aldrich Foundation, the charitable arm of Sigma-Aldrich, which began in March of 2004, have continued to contribute large and small gifts to over 250 charitable organizations over the past three years. Over the past five years, Sigma-Aldrich and the Sigma-Aldrich Foundation increased the amount of cash donations to charities. The future continues to look bright for The Sigma-Aldrich Foundation and all of the charities we support and the people they impact.

THE SIGMA-ALDRICH FOUNDATION BEGAN, AND CONTINUES, WITH SIX GUIDING OBJECTIVES.

- The advancement of science
- Education and related activities that build and train tomorrow’s leaders and foster the development of well-rounded citizens.
- Health and Human Services, especially those focused on supporting youth and strengthening families.
- Innovation that directly or indirectly supports our corporate goals to unleash talent, delight customers and thrill shareholders.
- Thought leadership that fosters the general advancement of our initiatives to promote life science and high technology.
- Not-for-profit activities that are directly and actively supported by our Company’s key human assets-our employees, directors, trusted advisors, customers and fellow supporters of community initiatives.

Combining a corporate initiative of education and related activities, Sigma-Aldrich and the Sigma-Aldrich Foundation partner with local organizations that foster the growth and well-being of the community. By making math and science fun at a young age we hope to continue opening avenues for careers in the sciences.

MICHAEL HOGAN
Chief Financial Officer/Chief Administrative Officer
Our Communities

Giving back to the global community continues to be a priority for Sigma-Aldrich. Examples of our initiatives include:

- Our colleagues in the United Kingdom and Ireland supported awareness days to increase knowledge and raise funds for breast cancer and breast cancer research.
- In Italy, Sigma-Aldrich employees purchased fundraising calendars from the African relief agencies AMREF Italia and Unicef and distributed them to customers.
- In France, Company contributions, coupled with employee support, have helped advance in science through the industry’s annual AFM Telethon, one of France’s largest nation-wide events.
- Children at the Casa M.A.N.U. in Buenos Aires, Argentina, are dealing with the effects of HIV/AIDS. However, through employee support at our Sigma-Aldrich Argentina site, our partnership with Casa M.A.N.U. enables adventures to animal parks and a warm family atmosphere — all in the effort to provide these children with a full and happy childhood.
- The Sigma-Aldrich Inventory Donation Program was established in 2007 to support the Company’s Global Citizenship objectives. The program has made available thousands of products for donation to research and educational organizations. Products include biochemical and organic chemical products and kits, books, lab supplies and lab equipment. Donations made through this program have exceeded $6 million.

How can community partnerships be mutually beneficial? WORTH Industries creates a dignified working environment for the economically disadvantaged in the St. Louis community. Sigma-Aldrich, in need of an internal service to perform the sorting and reuse of containers and recyclable materials, contracts with WORTH Industries to meet this business need. Real estate is at a premium in most pharmaceutical and high technology facilities, and WORTH helps us by saving valuable Sigma-Aldrich square footage for more productive work. WORTH excels at the routine sorting and shipping of these materials and recyclables. Sigma-Aldrich is the beneficiary of this reliable service and looks forward to a continued business relationship.

In 2006, Team Sigma-Aldrich continued its growth and broadened its reach. Our five Company-sponsored events grew to 11 events, in six different U.S. cities where Sigma-Aldrich has offices. The number of participants also grew, to just over 1,000 employees, family members and friends.

Our 2007 Team Sigma-Aldrich efforts expanded yet again. With three additional events and another site location, Team Sigma-Aldrich was present in several locations, including St. Louis, Missouri; Milwaukee, Wisconsin; Boston, Massachusetts; Lenexa, Kansas; Bellefonte and Denver, Pennsylvania; and Houston, Texas. With more than 1,200 participants, our Team Sigma-Aldrich members continue demonstrating to not only our communities, but also to our customers, Sigma-Aldrich is committed to improving the lives of those around us.

While our 2008 Team Sigma-Aldrich program is under way, we have continued expanding and have included two of our international offices in the program. With estimated participation at over 1,500, we continue gaining momentum and energizing people to positively affect their communities.

Team Sigma-Aldrich Spotlights

Arthur’s Picnic in the Park — Combining a corporate initiative of education and related activities that build and train tomorrow’s leaders and foster the development of well-rounded citizens, Sigma-Aldrich and Team Sigma-Aldrich partner with local PBS affiliate KETC Channel 9 in St. Louis to sponsor Arthur’s Picnic in the Park and Cyberchase, an Emmy award-winning animated series, focusing on children, math and science. In 2006 and 2007, Sigma-Aldrich sponsored a four-page insert highlighting Arthur’s Picnic in the Park in The St. Louis Business Journal. The insert was reprinted and more than 26,000 copies were distributed to St. Louis city school children encouraging their involvement in this free, fun and educational event. Attendance soared to an estimated 35,000 people in 2007, an increase of over 15,000 people from the previous years. By making math and science fun at a young age, we hope to continue opening avenues for careers in the sciences.

Special Olympics — Team Sigma-Aldrich proudly supports the athletes who participate in the Special Olympics held in State College, Pennsylvania. Our Team Sigma-Aldrich members volunteer as judges and on-field event facilitators. With more than 2,000 athletes and 700 coaches, The Special Olympics provides participants with continuing opportunities to develop physical fitness, demonstrate courage, experience joy, and participate in a sharing of gifts, skills, and friendship with their families, other Special Olympics athletes, and the community. Aligning a corporate initiative focusing on health and human services, especially those focused on supporting youth and strengthening families, the Special Olympics and Team Sigma-Aldrich are a great match.
Our Workplace
We define personal sustainability as our ability to attract, engage, develop and retain the best science, business and leadership talent in the industry. We understand that the quality of our employee team drives our ability to fulfill our mission and execute our business strategy. With this in mind, the Company has developed an integrated approach that follows the lifecycle of employment.

The employment value proposition we present to prospective candidates is powerful, particularly to emerging scientists around the world who rely on our products and services. We utilize internships, on-campus recruiting and our relationships with key colleges and universities around the world to nurture a strong pool of scientific talent. Beyond science backgrounds, prospective candidates across many disciplines are drawn to our unparalleled track record of sales growth and performance.

OUR COMMITMENT TO A DIVERSE AND INCLUSIVE WORKPLACE
Diversity also plays a major role in our recruitment process. As a global company, Sigma-Aldrich is inherently diverse by nationality, our culture is very inclusive, and we will continue to work hard to ensure our talent pipeline is filled with a supply of diverse candidates for leadership roles.

With a compelling career message in place we make sure that we effectively identify and select the best-fit talent for Sigma-Aldrich. Pre-employment screening tools and selection processes help us to apply the best talent to the most challenging roles.

Culture of Respect and Commitment – The culture of an organization, the shared beliefs, assumptions and values of our employees, are inputs and outputs of our organization. Culture is reflected in the stories that employees share about the Company, symbols of what we feel is important - in the way we treat each other.

A number of great stories are told to help new employees understand the Company’s culture of respect and commitment. Research has demonstrated that employees who are afforded respect and dignity tend to treat customers the same way. Our Company has worked hard to select people of high integrity and expects employees to behave in ways that are consistent with our “One Company Values.”

2007 marked the beginning of a new initiative focused on the well-being of our own employees. With employees spending more than 36% of their waking time at work, we identified this as a key area to address. To meet more of our employees' needs, we launched a pilot program called Sigma-Aldrich Healthy Rewards. This total health program focuses on physical, mental, emotional and financial health. With dedicated activities including Lunch & Learns, Healthy Rewards Massages, Yoga and Weight Watchers at Work, we've begun to see a noted change in our program participants.

The program is expected to launch at sites across the world in 2009, anchored by a new innovative web tool to help track and reward our participants. Our employees’ workplace satisfaction is a direct component of talent retention and acquisition; we want to provide a healthy balance to help meet the needs of our most important resource.

Our Customers
COMMITMENT TO OUR CUSTOMERS’ SUCCESS
At Sigma-Aldrich we are committed to accelerating customers’ success through leadership in Life Science, High Technology and Service. In doing so, our leadership position is strengthened through further investments and expansion in new markets and faster growing economies. We remain a trusted partner in research and manufacturing as we enhance our global reach through excellence.

We aim to understand the requirements of our customers and deliver products and services that meet those requirements. One example of this commitment is delivered within the Quality Management System of SAFC, known as the Enhanced Quality Profile.

Customers have varying quality requirements for the raw materials they purchase for manufacturing purposes. These requirements may range from ISO 9001:2000 to cGMP. At SAFC, the level of quality available for the thousands of products we offer is defined by the specific needs of the manufacturing markets we serve. This ensures that customers receive the quality that they need without paying for services that they do not.

The Enhanced Quality Profile (EQP) program characterizes an individual product’s quality traits in a multilevel system so that our customers can be assured that a given product’s quality profile meets their individual requirements. These traits include availability of Product Origin information, vendor qualification data, recommended retest information, and many other attributes.

As an integral part of the EQP program, the SAFC Change Control Notification (CCN) program links our customers with the SAFC change management process. Those customers who have submitted a formal request for inclusion in the SAFC Change Control Notification program are notified for specific areas of change or potential change. This allows customers sufficient time to evaluate the impact of those changes on their processes.

COMMITMENT TO SAFETY
Our commitment to safety is beyond compare. Sigma-Aldrich has remained under the Reportable Incident Rate (RIR) industry average of 3.5 over the last decade. After working just under 17 million hours, we completed 2007 with a worldwide RIR of 0.94. We believe this success is evidence of our employees’ commitment to following safe work practices as well as the integration of a safe work ethic into our culture. In 2006, Sigma-Aldrich was presented with the Responsible Care Award in Arklow, Ireland. Responsible Care is an international chemical industry initiative that encourages companies to show commitment to improving all aspects of performance related to the protection of health, safety and the environment by going above and beyond regulatory obligations.
Along with an outstanding commitment from our employees to make safety a critical part of our culture, the following goals continue to move Sigma-Aldrich in the right direction:

- Meet and exceed, where possible, applicable governmental environmental protection, health and safety requirements.
- Design and operate facilities in a manner that reduces or eliminates risk.
- Assure emergency preparedness by employing risk reduction and loss prevention methods.

To ensure that employees are aware of the key performance metrics that guide the Company’s activities as well as to provide management with metrics to gauge performance, a Corporate Dashboard that provides a high level overview of key measures has been developed. This dashboard is visible through our corporate intranet, and poster versions are displayed throughout Sigma-Aldrich facilities. Items tracked include Sales, Service, Quality, Process Improvement, Customer Centricity, and Safety. Two metrics related to Quality are tracked within this dashboard. The first is Customer Complaints, which measures customer satisfaction with our products. The second is Customer Audit Observations, which measures customer satisfaction with the implemented Quality Systems. These metrics provide information to ensure quality systems remain on track and provide information to help drive improvement efforts.

### Our Suppliers

Our Global Procurement initiative is designed to ensure our suppliers provide material and services that meet or exceed our expectations in quality as well as on-time performance. We expect all of our suppliers and contractors to ensure that their employees are adequately protected and that they develop appropriate environmental improvements of their practices. We are constantly evaluating our supplier network and process to ensure compliance with all applicable laws, safety standards, and quality standards.

Our aim is to improve performance, not to terminate business. We want to create a climate of trust where suppliers feel free to approach us with a problem. Where possible, we work with suppliers to find a solution. In 2007, Sigma-Aldrich proudly accepted the Merck & Co. Inc. “Sector Operational Award.” Sigma-Aldrich was chosen for its outstanding sourcing services, helping Merck realize process efficiencies as well as significant savings.

Just as we expect of ourselves, we also expect our own suppliers to comply with all local and state regulations. We have a worldwide presence and expect any deviations to be flagged immediately. Select suppliers are assessed under a comprehensive supplier qualification program using risk-based assessment to ensure quality of product, continuity of supply and acceptable manufacturing practices. Quality, quantity and on-time delivery metrics are monitored for suppliers. These metrics are used in conjunction with the current status of their quality system to evaluate a supplier against our requirements.
Environmental Sustainability

Environmental Protection, Health and Safety Policy: Sigma-Aldrich is meeting society’s needs for products and services with progressively less negative impact on the world.

SIGMA-ALDRICH MAINTAINS THE FOLLOWING SIMPLE AND CLEAR GOALS FOR OUR OPERATIONS:

• Meet and exceed where possible, applicable governmental protection, health and safety requirements.
• Design and operate facilities in a manner that reduces or eliminates risk to the environment, human health and safety.
• Consistently evaluate the reduction, reuse, and recycling of materials across our business wherever possible.
• Maintain and continually improve environmental, health and safety performance to protect and promote the health and safety of our employees, neighbors and visitors.
• Minimize the amount of spent material generated that is released to the air, water or land.

• Assure emergency preparedness by employing risk reduction and loss prevention to avoid explosions, fires and accidental chemical releases.
• Support the underlying principles of the U.N. Global Compact for Sustainability.

TO MAKE THESE A REALITY, WE USE THE FOLLOWING KEY ENVIRONMENTAL, HEALTH AND SAFETY (EHS) FUNCTIONAL ACTIVITIES.

• Operational responsibility and accountability for EHS performance.
• EHS program training and record keeping to help assure employee understanding and compliance.
• Process improvements that are protective of the environment.
• EHS metrics that use past performance to identify a successful path forward.

STEVEN G. WALTON
Vice President EHS, Quality and Compliance
Sustaining Our Environment

In early 2007, Sigma-Aldrich founded the Worldwide Sustainable Development committee (WWSD) to represent our operations and the many geographic regions around the world where we are located. The WWSD committee’s mission is to monitor and direct sustainable development projects and initiatives at all Sigma-Aldrich locations.

The committee realizes that it must build lines of communication with its audiences and, at a minimum, provide the baseline data and information that would make for a significant disclosure of the initiatives underway and plans for the future with regard to recycling, energy conservation, safety, community engagement, supplier participation, and more. To that end, WWSD has implemented several programs to further our commitment to the environment.

WORLDWIDE SUSTAINABLE DEVELOPMENT HIGHLIGHTS

Energy Tracking – An energy and natural resource tracking project that tracks the utility invoices from our major facilities worldwide. The data will provide a basis to evaluate energy use, set performance goals, and implement energy conservation programs. The data collected will be used to calculate direct and indirect CO₂ emissions that we believe will allow participation in important climate change registries and other reporting formats.

Recycling – A database listing the recycling activities occurring worldwide. The database will be shared internally in an effort to harmonize activities across all facilities. In the future, the listing will also be posted on our public website to share knowledge and inspire collaboration with our customers and suppliers.

Green Chemistry – A worldwide assessment of all green chemistry practices employed within our operations. In the future, the technology will be available on our website to share knowledge, offer alternatives to our research customers, and inspire others in our industry.

Energy Use

Many energy sources are utilized at Sigma-Aldrich’s 116 facilities worldwide. Electricity and natural gas, however, represent more than 95% of the energy used to create our products and offer our services to customers worldwide.

The issues related to the cost of energy and availability have helped highlight the value of sustainable development programs and practices. We are currently using a utility tracking service to record energy and natural resource use. Each Sigma-Aldrich facility forwards its utility invoices to an independent tracking service that also computes direct and indirect CO₂ emissions related to energy use. The project is divided into two phases.

Phase I will include the collection of data from the largest manufacturing facilities worldwide. Phase II will include the facilities that are typically less energy intensive, such as small warehouses and offices. The metrics reported herein are derived only from some Phase I facilities. For the next few years, it is likely that environmental metrics will show increases in energy usage and subsequent CO₂ emissions as the global project extends its reach to include the energy use and emission data from more Phase I and Phase II facilities. Sigma-Aldrich felt it was important to begin communicating the status of projects and its related data as part of the Company’s commitment to our customers, employees and shareholders.

We have implemented a plan that allows for: a) energy and natural resource tracking; b) engineering evaluation of energy trends; c) identification of energy and natural resource conservation opportunities, and; d) continued monitoring for process improvement opportunities.

Natural Resource Use

During the construction of a $20.7 million cGMP animal and non-animal Protein Extraction and Purification project, an informal water survey helped discover an opportunity to conserve water. An ambitious employee found that the water originated from cooling and freezing equipment that was using “once through” city water on one side of some heat exchange equipment. Upon further investigation, it was discovered that the heat exchanger was positioned so that cooling tower water could be used on the same side as the “once through” city water. The cooling tower water system is a closed looped system, thus a much more efficient option.

The Maintenance department decided to investigate just how much city water was used compared to how much water the cooling towers would require. Sigma-Aldrich employees calculated that about 20 gallons (76 liters) per minute of city water was sent through the heat exchangers traveling directly to the sewer. At such a high rate around the clock, the volume of water being removed was quite significant. Further calculations revealed that switching from “once through” city water to the cooling towers would conserve about 10 million gallons per year.

The Maintenance department went to work quickly to re-route the cooling tower piping and valves so the heat exchanger could use the cooling tower water instead of the city water. This discovery helped raise awareness of other possible opportunities for conservation by process improvement and more efficient use of resources.
Carbon Emissions (as CO₂ equivalent)
Sigma-Aldrich recognizes the many benefits that reducing energy use and conserving raw materials provide to the world and to business sustainability. As a critical part of advancing life science, high technology research, and manufacturing on a global scale, we must strive to better understand the risks associated with a carbon-constrained world.

In 2007, Sigma-Aldrich established and implemented a plan to help the company reduce energy use and subsequent CO₂ emissions. The plan includes: a) the implementation of the energy use and natural resource tracking system to establish a baseline; b) an evaluation of energy use trends to identify facilities and opportunities for conservation projects; c) establishment of specific reduction goals; and d) the continual monitoring of progress and program modification. Specific reduction goals will be determined when the collection of data is complete and energy use trends can be better evaluated. By early 2008, much of the data for the largest manufacturing facilities had been collected. Energy evaluations and conservation projects have just started for a number of facilities, while some facilities have been implementing energy conservation projects over the last decade. An energy committee has also been formed to better align energy conservation projects and document progress for future reporting.

At Sigma-Aldrich, we have experienced first hand the positive benefits of sustainable development and we hope to expand our efforts and share this information in many venues such as the Carbon Disclosure Project (CDP6). For more information on the Carbon Disclosure Project and to review Sigma-Aldrich’s data pertaining to the CDP6, please visit cdproject.net.

WASTE REDUCTION
Milwaukee, WI – For many years, the Environmental Services (ES) department has taken waste minimization and process improvements very seriously. During the course of its daily operations, the ES department made important discoveries related to the disposal of packaging materials and chemical products. To better address improvement opportunities, a formal plan was created to:

1. Address miscellaneous waste,
2. Improve department efficiency,
3. Reduce disposal costs, and
4. Motivate and challenge department employees to enhance material reuse, reduction, and recycling efforts.

The first step to becoming “green” was changing the type and size of drums used for lab packing from 14-gallon poly drums to 30/55-gallon fiber drums and reusing the empty containers generated for Production and Packaging operations. This resulted in cost reduction, improved efficiencies, and reduced disposal and transportation costs.

Recycling
Brazil – The country of Brazil could be considered the world champion of recycling aluminum cans with a recycling index of 89%. In other words, of the 9.3 billion cans sold in 2003, 8.2 billion were used again as raw material. Sigma-Aldrich Brazil continued this recycling example by evaluating the main operating processes in order to identify which recycling actions could be implemented.

Since the evaluation, the Company’s Brazilian operations have taken many steps to promote practices that embrace sustainability in the corporate environment. These actions include:

- Cardboard boxes and packaging materials received from inbound product shipments are sorted into categories according to their suitability for reuse in the outbound shipments to customers. If the boxes are not too damaged from wear during transportation and handling, still in compliance with regulations on packaging and transportation of hazardous materials, and the warning labels can be taken off without damage, boxes, bottle protectors, dividers, and other internal packaging materials are reused for outbound shipping.
- Styrofoam packaging materials, both the “peanut” fills and bottle dividers, are also recycled. Likewise, the absorbent “diapers” and vermiculite have potential for reuse.
- Internal office documents are printed on both sides of printer paper and paper sheets that have only the front side printed are stored and used a second time by printing on the back.
- All non-usable and recyclable materials such as wooden pallets, damaged cardboard boxes, packaging materials, printer paper, old catalogs, glass bottles, aluminum cans, etc. are sold to recycling facilities or donated to non-profit organizations.

All of these actions have been successfully implemented with enthusiasm. Other initiatives are also in progress, including new glass cups for employees to reduce the use of plastic “throw-away” cups. Most of the collected recycling material is sold and the funds are used for purchasing other materials and services. Most importantly, these initiatives enable employees to keep up with environmental issues and extend these concepts to their homes and family.
Since 2002, approximately 350 bulk chemicals have been identified for reduction, reuse applications, or recycling, and more than 33,000 pre-packs of undamaged materials were recovered for re-packaging. This process resulted in a waste reduction of nearly 150 tons.

In March 2007, the Milwaukee and Sheboygan Environmental Services departments started a program called “Beneficial Reuse of Mixed Solvents.” Because the spent solvents generated from production are quite clean, they are often acceptable for other industrial applications. This resulted in the beneficial reuse of 890,000 gallons (3,341 tons) of mixed solvents a year.

The real benefit is that the above efforts helped in reducing waste and disposal costs, but also helped improve customer service and the efficient use of materials in other product streams and life cycles.

890,000 Gallons of mixed solvents reused annually
(3,341 tons)

THE CHALLENGES AND OPPORTUNITIES OF BEING GREEN
Numerous challenges come with efforts to go green. These may include storage space, communication, ISO standards, expense, and employee participation. While these challenges are clear, we believe the impact is well worth the effort. Here, we’d like to highlight a few examples in action:

Green Chemistry
We believe chemistry enables economic and environmental progress to move in harmony.

In 2007, Sigma-Aldrich formed a Worldwide Green Chemistry Committee comprised of scientists from key Sigma-Aldrich operations worldwide. The Committee’s mission is to promote innovative chemical technologies that reduce or eliminate the use or generation of hazardous substances in the design, manufacture, and use of chemical products. Members of the Committee meet once per month to discuss the issues, gather information, share worldwide operations, and plan and execute goals. The Committee is also working on making a Green Chemistry Library to share with internal and external customers. This information is expected to lead to green chemistry process improvement for Sigma-Aldrich and our customers.
Sigma-Aldrich’s focus on green chemistry, also known as sustainable chemistry, is to reduce the chemical-related impact on human health and the environment through dedicated and sustainable prevention programs. Green chemistry searches for alternative, environmentally-friendly reaction media and, at the same time, strives to increase reaction rates, lower reaction temperatures, and possibly lead to higher yields with a decrease in process time.

**Green Chemistry in Practice**

The following are three examples of how high-tech process improvements and “green chemistry” have been put to practical application at Sigma-Aldrich’s operations.

- **Poly-L-glutamic Acid Polymers, US Patent Granted (#7,317,070 dated 01-08-2008):** In general, for the large-scale manufacture of poly-L-glutamic acid polymers, \( \Gamma \)-benzyl-L-glutamate is used as a starting material. The protected polymer (poly-\( \Gamma \)-benzyl-L-glutamate) is made from \( \Gamma \)-benzyl-L-glutamic acid, N-carboxyanhydride. Removal of benzyl groups requires using hazardous, environmentally unsafe chemicals, HBr/Acetic Acid and highly flammable solvent, acetone, which limits the scale of operation. The process is unpredictable and also produces a by-product, benzyl bromide, which is a very strong lachrymator and a trace amount may cause problems for personnel and products. A relatively large volume of flammable hazardous waste is generated in this process. This patented new process eliminated the usage of hazardous and flammable chemicals, HBr/Acetic Acid (100L) and Acetone (100 gallons), and eliminated the lachrymator by product, benzyl bromide, from the process. We replaced the process with more environmentally friendly raw material (\( \Gamma \)-ethyl-L-glutamic acid). This new-patented process saves more than $100,000 annually.

- **NAD (Nicotinamide Adenine Dinucleotides)/Trehalose:** NAD/Trehalose procedure is used to clarify the yeast extract and then charge the solution onto charcoal columns. The charcoal columns absorbed the UV material, which contained the NAD. The columns were washed with a solution of 8-10% pyridine to elute the UV material. The NAD/Pyridine solution was then charged onto ion exchange resin. The UV absorbed onto the ion exchanger and the pyridine effluent was collected and disposed as hazardous waste. The Trehalose from the yeast extraction, which was in the effluent of the charcoal column, was collected and concentrated via nanofiltration membrane technology to reduce the volume to a manageable volume of solution. This solution contains all the salts from the yeast extraction that must be removed to meet the specification for the final product. Ion exchange resins, both anion and cation, were employed to remove all the salts. We replaced the process with electro-dialysis to replace the charcoal columns. The yeast extract is clarified and concentrated by nano-filtration to reduce the volume. The NAD/Trehalose solution is recycled through the Electro-Dialysis unit to remove 70-80% of the salts from the solution. The reduced ion material is then charged onto an anion exchange resin to recover the NAD, the trehalose is collected from the anion exchange effluent. The Trehalose is totally desalted on anion and cation exchange resins. The Green Chemistry process eliminated the usage of Pyridine (500 gallons), Charcoal (1,500kg), Sodium Hydroxide (1,500 gallons) and Hydrochloric Acid (2,000 gallons). Replaced the process with water using Electro-Dialysis process, and saved approximately $200,000 annually.

- **HF Gas Usage for Peptide Synthesis:** New process eliminated the usage of hazardous/poisonous/corrosive HF gas, Ethyl Ether (100 gallons). We replaced the process with a much safer chemical Trimethylsilyl trifluoromethane Sulfonate, and saved approximately $100,000 annually.

**Global Citizenship Award**

Our commitment to reduce our energy use, emissions, and manufacturing waste, and to enhance the protection of our environment continues through the implementation of process improvement initiatives. These improvements are created from the ingenuity of our employees, and have become very significant. In 2008, the Worldwide Sustainable Development committee created a way to recognize these improvements and share their benefits with other employees around the world.

Launched on April 22, Earth Day 2008, the Global Citizenship Award will accept employee nominations for process improvements that have reduced the impact of our operations on the environment. Each year on Earth Day, select project teams nominated throughout the previous year will be awarded for their contributions to reduce the impact of operations on the environment.
Fiscal Accountability is a priority. As a public company, it is of critical importance that we earn the trust of our customers, shareholders, and our employees.

At Sigma-Aldrich, honest and ethical business conduct is a cornerstone of our One Company values. Our Business Conduct Policy provides a foundation for good judgment when faced with choices of ethics and conduct. Under our One Company philosophy, this policy is applicable to all Sigma-Aldrich locations worldwide. Management, as well as employees in positions with authority to commit or expend Company resources or in possession of confidential Company information, are required to submit an annual questionnaire indicating their compliance with the policy.

The Company’s Officers bear responsibility for promoting integrity throughout the organization, with responsibilities to stakeholders both inside and outside of the Company. The Company’s Officers both adhere to these principles themselves and also ensure that a culture exists throughout Sigma-Aldrich that promotes the fair and timely reporting of the Company’s financial results and conditions.

THE COVERED OFFICERS ARE BOUND TO:

• Act with honesty and integrity, reporting actual or apparent conflicts of interest in personal and professional relationships to the Audit Committee of the Board of Directors and obtain the approval of the Audit Committee prior to entering into such relationships.

• Provide information that is accurate, complete, objective, relevant, timely and understandable to ensure full, fair accurate, timely, and understandable disclosures in reports and documents that the Company files with, or submits to, the Securities and Exchange Commission and in other public communications made by the Company.

• Comply with applicable laws, rules and regulations of federal, state, provincial and local governments, and other appropriate private and public regulatory agencies in all material respects.

• Promptly report to the corporate Governance Committee of the Board of Directors any conduct that the individual believes to be a violation of law or business ethics or of any provision of the Code, including any transaction or relationship that could reasonably be expected to give rise to such a conflict.

KAREN MILLER
Controller
Being Accountable

By every measure, 2007 was an exceptional year for our Company. We achieved a significant milestone by exceeding $2.0 billion in sales. We extended our record to 33 consecutive years of continuous growth in sales and earnings per share (EPS). All of the Company’s fundamentals are strong and getting stronger. To achieve this goal, we strive to provide a high standard of behavior along with unquestionable integrity. Continued honest and ethical business conduct is a cornerstone of our One Company values.

Potential policy exceptions are reported to a Company Officer and/or the Director, Internal Audit. Additionally, any employee, customer, vendor or other party wishing to communicate a confidential, anonymous concern regarding the Company’s Business Conduct Policy or other accounting, internal control or auditing matters can do so via the Whistleblower P.O. Box. Sigma-Aldrich is focused on taking our Company “beyond the numbers.” We are committed to our One Company values of honesty and integrity, providing transparency in our financial information and operating responsibly and in compliance at all times.

Enhancing Global Sustainability through Excellence

We hope our inaugural Global Citizenship Report demonstrates our desire and ambition to lead as a model in the industry. We expect to continually grow these success stories and to continually grow the measures and progress of the three elements that comprise our Sustainable Development program: Environmental Sustainability, Social Responsibility, and Fiscal Accountability.

Transparent Financial Records

FINANCIAL REPORTING COMPLIANCE
The financial records and internal controls of the Company’s operations must be maintained in accordance with U.S. Generally Accepted Accounting Principles (U.S. GAAP) and in compliance with Sarbanes-Oxley. For non-U.S. locations, statutory records must be maintained in compliance with local statutory accounting regulations, while monthly financial reporting to Corporate must comply with U.S. GAAP. The accounting systems and records of Sigma-Aldrich Corporation must fully and accurately reflect all business activities of the Company and serve as a basis for management of the business and to facilitate meeting the Company’s obligations to its shareholders, employees, customers and suppliers.

COMPLIANCE AND ETHICS
Maintaining our corporate integrity is the responsibility of every Sigma-Aldrich employee. The Company expects all employees to uphold this dedication to corporate ethics on a daily basis. Our Business Conduct Policy is a guide to help employees achieve the highest degree of personal and professional conduct.