Corporate Sustainability Report 2005 and 2006

a review of our progress, focus areas and goals

Genentech

IN BUSINESS FOR LIFE

CEO Message

I am pleased to introduce our second Corporate Sustainability Report, in which we share our environmental performance and emerging sustainability strategy with employees, patients, neighbors, friends, shareholders and others who take an interest in our business.

As a company, Genentech is committed to making a difference in the world of medicine by developing therapies for serious and life-threatening diseases. This report provides an opportunity to learn more about how this commitment translates into the areas of environmental sustainability and employee health, safety and wellness.

This report will tell you about the progress we have made in reaching our water and energy use goals (first announced in our 2004 report), the actions that Genentech is taking now, and the key projects we plan to implement in the future. In recent years, Genentech has experienced rapid and significant growth. Managing this growth in a sustainable way is an important priority for us, and many of the initiatives you will read about in this report are focused on this objective.

We have also made a special effort in this report to introduce you to the unique local environments in which Genentech has the privilege of operating. As you will learn, our stewardship efforts reflect not only our commitment to environmental responsibility, but also to the particular local conditions and needs of the communities in which we operate.

Our employees are at the heart of Genentech's sustainability programs. We are proud to report on the employee-driven sustainability innovations taking place throughout the company. The skills, capabilities and commitment of our employees are key to ensuring that Genentech has a positive impact on the communities in which we operate.

While we are pleased with the progress we have made, we recognize that sustainability is an ongoing project. We look forward to continuing to share our sustainability strategies and metrics with you in the future as our approaches to sustainability evolve along with the company.

We received numerous responses to our 2004 report, the first-ever such report published by a biotherapeutics company in the United States. We value your thoughts and feedback, and we look forward to hearing from you.

Arthur D. Levinson, Ph. D.
Chairman and CEO

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Introduction

This report builds on the developments, commitments and goals described in our 2004 Environmental Performance Report, and it expands the scope of our reporting to include our Employee Health, Safety and Wellness programs and performance.

In our 2004 report, we committed to using an expanded set of indicators and a broader data set to provide a more complete picture of our performance. In this year's report, you will find the following new data:

Waste: In 2004, we committed to expanding our report to include metrics on additional waste streams not included in the 2004 report. The 2005/2006 data table shows figures for hazardous and other US regulated wastes and for non-regulated wastes.

Employee Health and Safety: Recognizing that our working environment is very much a part of the larger environment in which we operate, we have now included key **metrics**[1] related to employee health and safety.

Year-Over-Year Trends: To give readers a dynamic view of our environmental progress over time, we have included charts showing progress towards our **sustainability**[2] goals.

In 2006, we updated our Environment, Health & Safety (EHS) policy statement and we explain in this report how we have strengthened our policy commitments. As we grow, it is vital that we have proven EHS compliance assurance and risk management processes in place to deliver on our EHS Policy commitments. In this report, we describe an EHS risk management system rating and guidance tool that several Genentech organizations are adopting known as the isrs7 (formerly known as the International Safety Rating System and owned and supported by Det Norske Veritas of Norway). The isrs7 will help us measure improvements in our EHS management practices during the coming years of expected growth. We look forward to sharing with you our progress towards implementing use of this isrs7 rating tool in future issues of this report.

While our goals for water and energy use efficiency remain the same, we have decided to approach our commitment to biotechnology stewardship in a new way given the rapid growth that the company is experiencing. You can learn about this change in the Environmental Commitment section.

As you read through this report, you will find case studies on significant environmental and employee wellness projects that the company undertook in 2005 and 2006, from employee commuting to a new fitness center to enhanced waste reduction and recycling.

Jerry L. Jones,
Director Corporate Environment, Health & Safety

[1] The means for measuring environmental, health and safety performance information. Examples include volume of water consumed, number of workplace injuries, and weight of waste generated.

[2] Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Jerry Jones discusses energy conservation with Dave Lausch. In 2005, Dave's team reduced Genentech's greenhouse gas emissions by 279 tons per year by making operational changes to the building ventilation systems.

Considered the founder of the **biotechnology**[3] industry, Genentech has been delivering on the promise of biotechnology for over 30 years, using human genetic information to discover, develop, commercialize and manufacture biotherapeutics that address significant unmet medical needs. Today, Genentech is among the world's leading biotech companies, with multiple products on the market for serious or life-threatening medical conditions and more than 50 projects in the pipeline. The company is the leading provider of anti-tumor biotherapeutics in the United States. With its strength in all areas of the drug development process – from research and development to manufacturing and commercialization – Genentech continues to translate innovative science into breakthrough therapies for patients.

Our Communities

Genentech has its headquarters in South San Francisco, California, with several locations dedicated to manufacturing operations, clinical operations and distribution.

South San Francisco, California
Since its founding in 1976, Genentech has made its headquarters in South San Francisco, California. Starting with one rented building and two staff members, the company's South San Francisco site has grown to a full campus with multiple buildings. Today, the site is home to a research center, manufacturing operations, several office buildings and various business functions.

South San Francisco (population 62,552) is located on the San Francisco peninsula and is one of the many communities that make up the larger Bay Area (population 6,783,760). Just north of San Francisco International Airport, the city sits in a small valley between San Bruno Mountain and the Coast Range. Originally called "Baden" (the German name for spa), much of what is now South San Francisco was initially agricultural land. Small pockets of farmland still exist near San Bruno Mountain.

A thriving industrial base emerged in South San Francisco, earning it the nickname, "The Industrial City." More recently, the city established itself as a biotechnology hub, a tribute to its position as the "Birthplace of Biotech" from Genentech's founding in 1976.

One of the key environmental issues receiving attention today in South San Francisco is traffic congestion. In San Mateo County, home of South San Francisco, congestion is estimated to cause more than 33,000 **vehicle hours of delay**[4] each day[5]. In addition to economic and quality of life issues, this congestion adds a heavy burden to the environment in the form of increased emissions of carbon monoxide, smog, particulates and **greenhouse gases**[6].

Looking ahead, congestion in San Mateo County is expected to grow even more serious, as growth in the number of commuters is projected to outpace growth in the use of mass transit; in the period from 2006 through 2015, vehicle hours of delay are projected to increase by 39 percent. For information about how Genentech is working to reduce its impact, see the story on Employee Commuting in the Environmental Commitment section of this report.

[3] Biotechnology medicines use the human body's own natural defense mechanisms to fight disease, including cells, genes, proteins, enzymes and antibodies. By harnessing natural mechanisms, scientists can find more accurate ways to solve medical problems while producing fewer side effects and unintended consequences for the individual patient.

[4] An estimate based on morning rush hour travel times, less free-flow travel times, and applied to the volumes that are expected in the combined morning and evening rush hours.

[5] Figures on vehicle hours of delay are taken from Table 20, "Travel Forecasts for the San Francisco Bay Area, 1990 – 2030," Metropolitan Transportation Commission, January 2005.

[6] Gases that have a global warming potential when released to the atmosphere. Greenhouse gases include carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4) and hydrofluorocarbons (HFCs).

Vacaville, California

Genentech's Vacaville, California, site was acquired in 1994 and is located on 100 acres in Solano County, approximately 50 miles northeast of San Francisco. The Vacaville facility was first licensed to produce Herceptin® (Trastuzumab) in 2000. The site houses manufacturing operations as well as quality and administrative services. Currently, the Vacaville facility is undergoing a major expansion to supplement its 144,000 liter manufacturing capacity to produce Avastin® (bevacizumab), Rituxan® (Rituximab) and Herceptin bulk drug substance. When it is completed, the Vacaville operation will be the largest biotechnology manufacturing facility of its kind in the world.

Bordered by rolling hillsides, fruit orchards and fertile farmland, Vacaville sits between Sacramento and San Francisco and is home to nearly 100,000 residents. Founded in 1852, the town was a Pony Express stop and home to many large produce companies and local farms that flourished due to the Vaca Valley's rich soil and relatively accessible ground water supplies. Vacaville today has become home to several biotherapeutic manufacturers and is part of one of the fastest growing areas of the nation.

A key environmental issue facing the Vacaville area is water supply. The confluence of heritage agriculture, booming residential development and the new industrial base has led to demand for more and higher-quality water. At particular risk is the North Bay Aqueduct, which supplies about 35 percent of the water used in Vacaville[7]. Climate models predict that decreased snow pack (resulting from climate change) will decrease the amount of water recharging this aqueduct, particularly in summer months[8]. This decreased supply, in combination with a predicted 40 percent state-wide growth in water demand over the next 25 years[9], is expected to create water stresses in the region.

As we described in the 2004 report, Genentech's Vacaville facility has already made a switch to untreated water for irrigation and cooling purposes, freeing up millions of gallons of drinking water for other purposes in the region. This untreated water supply represents 12 percent of the Vacaville facility's total water consumption during 2005. For information about how the Vacaville facility is working to further increase its water efficiency and reduce its reliance on treated water, see the Environmental Commitment section.

[7] Source: Vacaville Public Works Department, www.ci.vacaville.ca.uk/departments/public_works/water_quality/faq.php

[8] Source: Assessing Effects of Climate Change on Flood Risk in the Sacramento-San Joaquin Delta

[9] Source: Water for Growth: California's New Frontier (Public Policy Institute of California, 2005)

Oceanside, California
In June 2005, Genentech purchased a state-of-the-art manufacturing facility in Oceanside, California, about 35 miles north of San Diego. This facility is expected to receive licensure from the U.S. Food and Drug Administration in the first half of 2007. Upon licensure, the operation will have 90,000 liters of capacity that will be initially dedicated to producing Avastin® bulk drug substance.

In February 2006, Genentech purchased a nearby clinical manufacturing facility, also in Oceanside. This facility is expected to be operational in the first half of 2007.

These facilities are not included in any of the metrics provided in this report because of the lack of historical data. See "Reporting Philosophy" for details on Genentech's policy for publishing data on new facilities.

Porriño, Spain
Located in the Pontevedra province of Galicia, in Spain's northwest corner, Genentech's Porriño manufacturing facility was acquired in 2000.

The Porriño facility was sold to Lonza Group at the end of 2006. Under the terms of a supply agreement with Lonza, the facility will continue to manufacture Avastin bulk drug substance for Genentech.

We provide details on the Porriño facility in this report, however we will not be reporting in future reports since it is now owned by Lonza.

Louisville, Kentucky
In 2005, Genentech decided to locate a warehouse and distribution facility in Louisville, Kentucky, which became operational in January 2006. The facility plays an important role in helping provide Genentech with the distribution capacity needed to support our anticipated growth, as well as enhance our ability to get products to our patients quickly and improve our responsiveness to our customers on the East Coast.

This facility, which became operational in January 2006, is not included in any of the metrics provided in this report due to the lack of historical data. See "Reporting Philosophy" for details on Genentech's policy for publishing data on new facilities.

About Our Products

For the latest information about Genentech's products, please visit our website at www.gene.com.

Financial Information

For the latest financial information about Genentech, please visit our website at www.gene.com.

Policy

The Genentech EHS policy was updated in November 2006 and the new policy is reproduced below.

EHS Policy
Consistent with our mission, we will be an industry leader in EHS compliance and will follow relevant industry standards and best practices for protecting workers, the environment, and facilities. We will strive to use natural resources in an efficient and sustainable manner and will conduct our business according to the following principles and practices:

- **Worker Protection and Wellness:** We will manage work place risks and provide appropriate training to ensure safe and healthy working conditions across Genentech. We will provide appropriate hazard warnings to organizations that manufacture, transport or administer our products to patients. We will support healthy lifestyles for employees through wellness programs and access to quality medical care.
- **Environmental Protection and Stewardship:** We will strive to minimize environmental impacts from our facilities and products. We will work to minimize waste, conserve energy and water, and adopt appropriate purchasing practices to promote environmental stewardship. We will employ responsible design principles and operating practices to manage the risks of unauthorized or accidental releases.
- **Contractor Safety:** We will require contractors who work on our premises to comply with regulations and site rules and to adhere to high standards for protection of workers, the environment, and property.
- **Emergency Preparedness:** We will identify reasonably anticipated emergency situations and be prepared to respond appropriately to minimize harm to people, the environment, and property.
- **Continual Improvement:** We will strive to continually improve our EHS performance and EHS management processes by various measures, including the following:
  - learning from events – accidents, close calls, and identified substandard conditions;
  - benchmarking industry best practices to identify improvement opportunities; and
  - conducting reviews and auditing our EHS management system and operations to monitor progress and compliance.

EHS Responsibilities of Employees
- Employee Participation and Accountability: Compliance with EHS regulations, policy, standards, rules and procedures is everyone's responsibility. All employees are expected to help manage EHS risks and to act responsibly to protect themselves, co-workers, the environment, and our facilities.
- Management Leadership, Participation and Accountability: Our leaders, from top management to front-line supervisors, are responsible and accountable for EHS compliance and for managing EHS risks of their organizations. Their active participation includes collaborating across organizational lines to integrate EHS risk management practices into our routine business processes.

EHS Management System

Isrs7 is a widely recognized EHS management system rating tool for measuring, improving and demonstrating EHS performance. It was formerly known as the International Safety Rating System and is owned and supported by Det Norske Veritas of Norway. This seventh edition of the isrs was developed as a Joint Industry Project between DNV and industrial companies and is based on the long established International Safety Rating System (ISRS), originally developed in the mid 1970s.

Starting in early 2006, Genentech has been formalizing its continual improvement processes through adoption of an EHS risk management framework within our product manufacturing and quality organizational units that is consistent with the best practices described in and rated by the DNV isrs7. These units have the responsibility to manage a substantial portion of the EHS risks of the company.

Isrs7 includes 15 auditable processes as shown below and the requirements for a range of international standards including ISO14001 – Environmental Management, OHSAS18001 – Health and Safety Management and the Global Reporting Initiative 2002 – Corporate Social Responsibility.

Isrs7 Auditable Processes

Process 1 – Leadership
Process 2 – Planning and Administration
Process 3 – Risk Evaluation
Process 4 – Human Resources
Process 5 – Compliance Assessment
Process 6 – Project Management
Process 7 – Training and Competence
Process 8 – Communications and Promotions
Process 9 – Risk Control
Process 10 – Asset Management
Process 11 – Contractor Management and Purchasing
Process 12 – Emergency Preparedness
Process 13 – Learning from Events
Process 14 – Risk Monitoring
Process 15 – Results and Review

The initiative will involve regular audits that result in a score that rates the effectiveness of the company's environmental and safety protection management system processes. Our goal is to achieve an isrs7 rating score comparable with that of world-class safety programs by 2010.

Regulatory Oversight

A variety of government agencies oversee the safety and environmental performance of Genentech's facilities. These agencies range from local fire departments to local, regional and national environmental agencies.

Generally, regulatory agencies monitor conditions and developments at Genentech's facilities by requiring permits, notifications and periodic reports on key issues, as well as by inspecting Genentech's facilities.

Below is a list of the key regulatory agencies associated with environmental, health and safety performance that conducted inspections or evaluated operations at Genentech facilities in 2005 and 2006:

Genentech Facility	Inspecting Agencies
South San Francisco, California	• City of South San Francisco • San Francisco Bay Regional Water Quality Control Board • U.S. Environmental Protection Agency • South San Francisco Fire Department • San Mateo County Environmental Health Department • California Occupational Safety & Health Administration • Bay Area Air Quality Management District
Vacaville, California	• Vacaville Public Works Wastewater • Yolo Solano Air Quality Management District • Vacaville Fire Department • Solano County Environmental Health Services
Porriño, Spain	• SEPRONA (Environmental Protection Agency) • Northern Water Resources Confederation

Genentech has established strong working relationships with these agencies. When compliance issues are identified at Genentech, we diligently work to resolve the issue. In addition, we view these events as an opportunity to learn and improve our operations and increase EHS awareness.

During 2004, Genentech's Sustainability Steering Committee examined the upcoming changes to our business and the world around us and asked the following questions:

- How will environmental issues affect the way that Genentech does business?
- How do changes to Genentech's operations affect the environment?

In 2004, Genentech evaluated the environmental aspects of its business and determined that the company could make the greatest positive impact by focusing on:

- Water Use
- Greenhouse Gas Emissions
- Biotechnology Stewardship

We believe that the commitments to improvements in these areas will help Genentech meet its business objectives while protecting the environment.

Water

Our Commitment

Genentech relies on a plentiful supply of high-quality water for use in our manufacturing, laboratory and other operations. As a significant industrial user of water, we have a responsibility to make efficient use of this precious natural resource. In 2004, we publicly committed to the following goal:

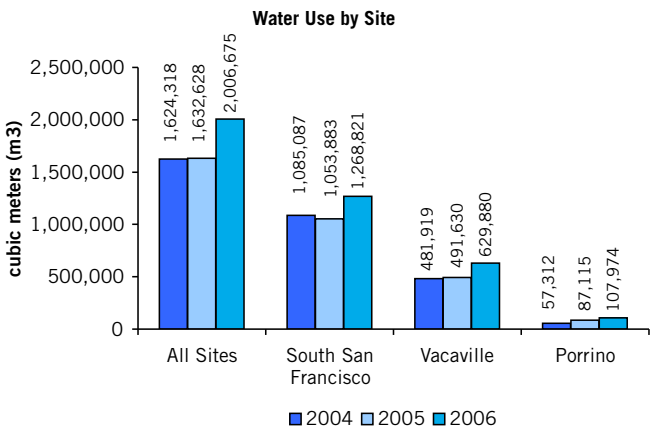
Improve water efficiency* by 10 percent by the year 2010, compared to 2004.

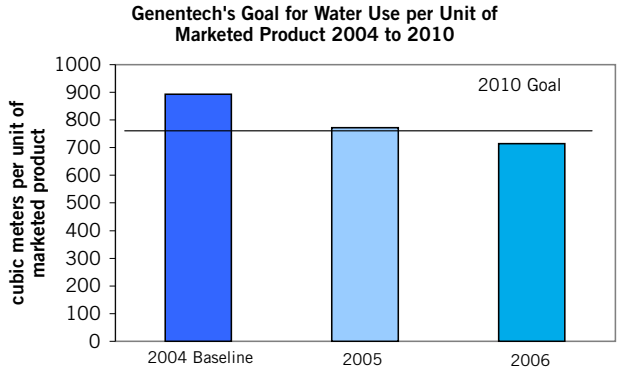
* Water efficiency is measured as total water use divided by units of marketed product produced.

Our Progress

We are pleased to report that we are on track to meet our water goal, based on trended water usage and production patterns.

In 2005 alone, our water use per unit of production dropped by 13 percent compared to 2004. Further efficiencies were gained in 2006, when our water use per unit of production was 20 percent lower than our 2004 baseline. If we maintain our current level of water efficiency, we will have achieved our goal by 2010. We will continue to track this metric and report progress towards our goal.





Behind the Numbers

We experienced significant growth in production in both 2005 and 2006. In 2005, our productivity grew by more than 16 percent over 2004 levels. However, our total water use increased by only 0.5 percent. In fact, water use during 2005 at our South San Francisco facility was slightly less than in 2004. A small increase in total company water use, offset by such a large increase in production, resulted in a 13 percent improvement in water efficiency across the company in 2005.

While our water use grew in 2006 with usage levels 23 percent higher than the 2004 baseline, the increase in water consumption was outpaced by the growth in production. In 2006 our production totals were 54 percent higher than in 2004, and consequently our water efficiency in 2006 represented a 20 percent improvement over 2004 levels.

Traditionally, water use is tied closely to production. So why did water use in 2005 and 2006 not rise commensurate with production? There were two drivers for this divergence:

Manufacturing Efficiency Gains: Manufacturing efficiency improved due to both an improved **success rate**[10] as well as higher **yield**[11]. These efficiency gains reflect the continual improvement of Genentech's manufacturing processes. The biotherapeutic manufacturing process is extremely complex – subtle differences in conditions and processes can lead to significantly different outcomes in production yields. Genentech has systems in place to learn from experience; improvements in our manufacturing efficiency reflect the accumulation of knowledge over time.

Water Conversation Projects: Water conservation projects were undertaken in 2005 and 2006. Enhancements to the delivery systems and operational changes to the chiller plant in a number of our South San Francisco buildings resulted in a reduction of leaks. These projects are estimated to save about 5.5 million gallons of water each year. An example of one of the projects implemented in 2006 is the replacement of vacuum pump cooling systems with closed loop systems, saving approximately 300,000 gallons per year.

Looking forward, in 2007 we will be replacing double mechanical seals on our manufacturing water pumps with single mechanical seals. This project alone is anticipated to save 600,000 gallons each year. At our Vacaville plant we are focusing on a state-of-the-art water purification system for the plant's expansion. Although this system will not be operational for several more years, it is expected to save tens of millions of gallons of water each year. The Vacaville facility continues to evaluate other means of reducing water use, such as a computer-controlled irrigation management system that has the potential to save significant amounts of irrigation water.

We look forward to reporting progress on these and other water saving projects in subsequent reports.

Greenhouse Gases

Our Commitment

2005 and 2006 saw a growing public awareness about the immediate consequences and long-term risks of climate change. In our 2004 report, we recognized the value of taking action to mitigate long-term harm, and we committed to making more efficient use of energy, which accounts for 75 percent of our greenhouse gas emissions (GHG). We have committed to the following goal:

Improve energy efficiency* by 10 percent by the year 2010, compared to 2004.

* Energy efficiency is measured as total weight of energy-related greenhouse gases (measured in tons CO^2 equivalents) divided by units of marketed product produced.

[10] Percentage of production runs which result in successful output of product.

[11] The amount of product obtained at the end of a successful production run.

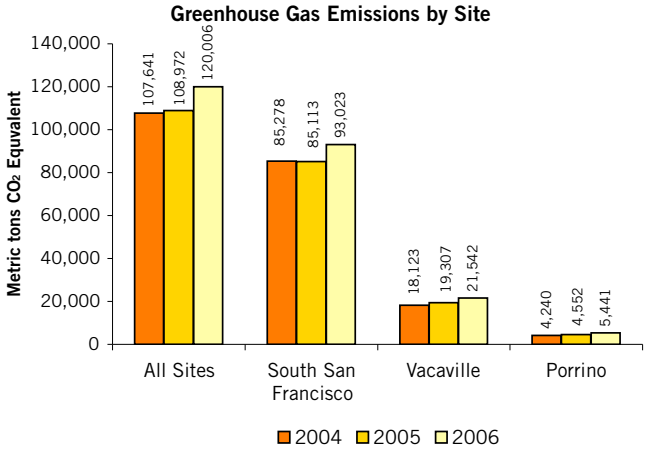
Kuruvilla Jacob beneath newly retrofitted light fixtures. After a successful pilot project, the energy-efficient light fixtures are set to be rolled out across a number of buildings at Genentech's South San Francisco campus.

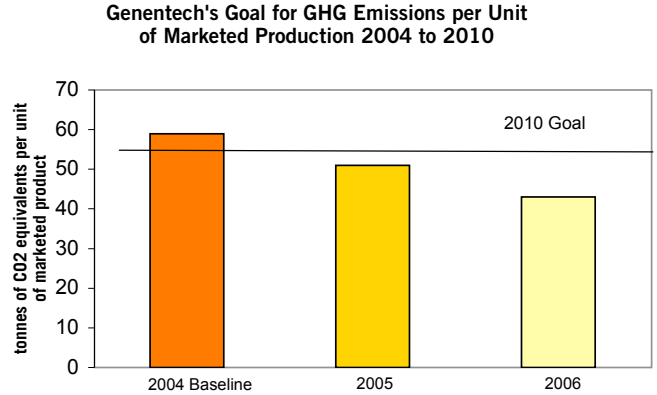
Reflecting Genentech's commitment to addressing its greenhouse gas emissions, and recognizing the potential future impact of the new California Climate Change law, AB32[12] , Genentech has joined the California Climate Action Registry. Membership to the Registry involves Genentech reporting annually with third party verification regarding its greenhouse gas emissions, in line with a protocol that reflects current best practice in greenhouse gas emissions reporting.

Our Progress

Based on current usage and production patterns, we are on track to meet our greenhouse gas goal. Even with the significant growth in production and the physical expansion at our South San Francisco campus, our energy-related greenhouse gases grew by only one percent in 2005 when compared with the 2004 baseline. Because of this sharp rise in production and small increase in energy use, our greenhouse gas efficiency improved by 13 percent in 2005.

As with water, the growth in energy use during 2006 was outpaced by the growth in production, and we are pleased to report that our greenhouse gas efficiency in 2006 improved by 27 percent when compared to the 2004 baseline.





Behind the Numbers

As with water, the two major factors leading to the improvement in energy efficiency were manufacturing efficiency gains and energy management projects. Manufacturing efficiency gains are discussed in the water section. Energy management projects in 2005 and 2006 included the following:

- A reduction in the hours of operation of our heating, ventilation and air conditioning (HVAC) systems in South San Francisco. This project has alone saved 1,000,000 kilowatt-hours per year (kwh/yr), approximately equivalent to the annual electricity used by 100 American households[13]. This reduction also equates to avoidance of 279 tons of carbon dioxide equivalents per year (CO_2e/yr).
- Lighting retrofits completed in a number of our South San Francisco buildings. These retrofits achieved energy savings of 2,000,000 kwh/yr, equivalent to 560 tons CO_2e/yr, or 200 American households.

In 2007, a range of energy management projects will be completed including improvements to our lighting and HVAC systems, with anticipated annual energy savings of 2,500,000 kwh per year. Green building design also plays a prominent role in our energy management strategy. For one example of this, see the sidebar story "South Campus Green Design" below. Look to future reports for updates on our progress on these and other projects.

Our energy management efforts earned external recognition during 2006. Genentech received an award for participation in the 2006 Business Energy Coalition and specifically for helping, along with other Coalition members, to mitigate electrical demand constraints during peak summer conditions. In addition, two of our South San Francisco campus buildings received an Energy Star designation from the US Environmental Protection Agency for reducing standard building energy consumption by more than 25 percent. The Genentech buildings were the only San Francisco Bay Area facilities out of a total of 41 California facilities to be awarded the designation during 2006.

Energy use generates about 75 percent of Genentech's greenhouse gas emissions; most of the other 25 percent comes from transportation. To learn more about Genentech's efforts to reduce transportation greenhouse gases, see the sidebar story on Employee Commuting in the Environmental Commitment section of this report.

[12] California Global Warming Solutions Act of 2006 will require mandatory reporting of GHG emissions for significant sources and sets emission limits to cut the state's GHG emissions to 1990 levels by 2020.

[13] The American Wind Energy Association estimates that the average American household consumes 10,000 kwh electricity per year.

Biotech Stewardship

Previously, Genentech outlined focus areas for our stewardship objectives associated with biotechnology. We discussed evaluating the environmental impacts of the biotherapeutic industry in general, and Genentech's operations in particular.

Genentech's recent success in clinical trials has resulted in increased demand for our products and the company has grown to meet this demand. Given our growth and high demand, Genentech believes that we can best meet our commitment to biotechnology stewardship by focusing on our own operations and manufacturing facilities for the immediate future. Accordingly, we have revised our commitment to biotechnology stewardship as follows:

- Ensuring responsible and safe operating practices for all Genentech operations remains foremost;
- Continuously improving our risk management processes to ensure worker safety and environmental stewardship for our current and future operations; and
- Publishing updates on our progress in forthcoming editions of our Corporate Sustainability Report.

Feasibility Study into the Recovery and Re-use of a Manufacturing By-product

As part of its environmental stewardship activities, Genentech evaluates ways to minimize, eliminate or find beneficial uses for its wastes streams. During 2006, as part of a cooperative industry and university effort, Jerry Jones, a Genentech chemical engineer and the company EHS Director, worked with four students from San Jose State University's Chemical and Materials Engineering Department on a plant design and economic feasibility study to evaluate the potential reuse of a by-product from Genentech's manufacturing operations. The waste stream considered represents Genentech's single largest volume hazardous waste and is generated at all three of Genentech's manufacturing sites in California. The purpose of the project was to develop a plant design based on a conceptual process conceived by the Genentech engineer and to determine the economic feasibility of using the process to recover the hazardous constituent which has a use in the oil and gas industry.

The results of the preliminary engineering plant design and economic feasibility study indicated that recovery of this by-product would not be cost effective, even when taking credit for close to $500,000/year in cost savings from avoiding future disposal costs for the waste. The estimated capital cost for the recovery operation was in excess of $7 million.

However, other ongoing internal process improvement work has continued to investigate a substitute for the toxic salt that leads to generation of the hazardous waste and an alternate approach has been found that may be used for Genentech's future products.

Recycling in South San Francisco

2005 and 2006 were very successful years for improving recycling and pollution prevention at Genentech's South San Francisco facility.

In 2004, Genentech's Corporate Facilities Services department invested in upgrades to office and cafeteria recycling, including new bins, stronger partnerships among key departments, and a broad informational campaign to raise awareness among users. These efforts came to fruition in 2005, with a 15-fold increase in mixed paper recycling and a 53-fold increase in aluminum, glass and plastic recycling. Three new recycling streams were added – lab plastics, industrial scrap metal and cafeteria food waste. Industrial recycling streams such as wood pallets and cardboard grew as key departments made continual improvements to their business processes for capturing recyclables.

By the end of 2005, the facility had doubled its tonnage of recycled materials and pushed its diversion rate – the percentage of waste materials that are recycled instead of landfilled or incinerated – up from 23 percent to 31 percent.

The team continued to build on the success of 2005 and made even bigger strides during 2006. Corporate Facilities Services helped upgrade cafeteria recycling and found new waste streams to recycle. These included tyvek suits, certain types of laboratory glass and compostables. We also built greater employee awareness, stronger partnerships with key departments, and better collection procedures.

By the end of 2006, the facility again doubled its tonnage of recycled materials – increasing the percentage of waste materials that are recycled instead of landfilled or incinerated – from 31 percent to 46 percent. Our South San Francisco and Vacaville facilities were both named as California WRAP (Waste Reduction Awards Program) winners for 2006.

Kevin Manalili, Genentech's South San Francisco Campus Services manager is very proud of the results the teams have achieved "Genentech is serious in its efforts to be green, recycling many different types of material and helping preserve our precious natural resources. These efforts also help save money, and that's good for our business. Through recycling wastes, we create jobs for local citizens, create resource markets for raw materials, and minimize our impact on the environment. For example, we reduce our burden on North American forests by not only purchasing recycled paper, but also providing recycled office paper to the marketplace for remanufacturing and sale to other consumers."

Reducing Waste from our Cafeterias

Doing the right thing for the environment is a priority at Genentech. We are pleased to tell you about a major program which was initiated by our Green Genes Team[14] and piloted in our South San Francisco cafeterias in 2006.

The program involves the replacement of styrofoam and other plastic cafeteria disposables, such as plates, bowls, cutlery, cups, trays and packaging, with items made from renewable and 100 percent bio-degradable and compostable materials such as sugarcane, potato starch and soy oil. The program extends to disposables used in Genentech cafeterias, coffee stations and catering orders. These products provide a range of environmental benefits including a reduction in greenhouse gases produced, fossil fuel use associated with the manufacture of styrofoam and other plastic materials and diversion from landfill through the composting of waste items, which will generate fertilizer as a by-product.

Following the success of the pilot and the positive employee feedback received, the program is due for roll-out to all Genentech food service operations during 2007. Suzanne Roller of Employee Services, who is responsible for the program says "This is a great example of how Genentech is living its environmental values. As a result of this program, Genentech will divert almost 3 million styrofoam cups, equivalent to 54 tons, from landfill every year."

[14] The Green Genes Team is a grassroots, science-based effort that brings employees together based on shared values and common interests to find ways to minimize Genentech's environmental impact.

South Campus Green Design

In our 2004 Corporate Environmental Performance Report, we outlined how green building design would become a key strategy in improving Genentech's energy efficiency while rapidly expanding the square footage of our operations. An example of how Genentech is executing this strategy can be seen in our South Campus project in South San Francisco.

Genentech is mapping its growth, with a potential planned development at its South San Francisco campus, with an emphasis on new research laboratories and office space. One element of this growth is a new South Campus, a planned eight-building, 780,000 square foot complex. Two of the buildings have already been occupied and the remaining six will be ready for occupancy over the next two years.

Energy efficiency is always a strong consideration for Genentech when designing new buildings, but it has to be balanced against many other factors, such as the occupancy timing, capital cost and user needs.

For the South Campus, there was yet another consideration – Genentech would not own the buildings outright, but would instead lease the buildings from the current property owner.

This presented challenges to the design team, as two of the most important factors of a building's energy efficiency – **orientation**[15], which affects solar exposure, and **envelope**[16], which affects energy loss – were determined by the property owner. Another implication of leasing: Genentech would only have 12 years – the initial lease term – to recoup any investment in energy efficiency, instead of the usual 30 years for an owned building.

Nevertheless, the South Campus design team was determined to identify and implement the opportunities it could for energy efficiency, with a particular emphasis on the mechanical equipment. The HVAC systems are designed with efficient rooftop air conditioners, chiller plants and motors; water systems will be fitted with efficient pumps; and offices will use efficient lighting.

Consequently, the efficiency of these buildings will significantly surpass building code requirements for energy efficiency. Misha Anissimov, Genentech's lead mechanical engineer for this project, speaks on the positive impacts of the energy-efficient buildings "Taking green design beyond minimum code requirements is leadership and a necessary step toward corporate environmental sustainability. When the bar is raised, we all benefit."

[15] Directional position of building layout, which affects exposure to weather and solar gain.

[16] The external façade and roofing elements of a building structure. The construction of the envelope affects a building's energy performance with respect to daylighting, thermal insulation and air leakage.

Misha Anissimov with energy-efficient condenser pump motors at Genentech's new South San Francisco South Campus complex. Efficient equipment such as this enabled the new complex to significantly surpass building code energy efficiency requirements.

Employee Commuting in South San Francisco

For several years running now, Genentech's innovative employee commuting program in South San Francisco has landed the facility on the U.S. Environmental Protection Agency's Best Workplaces for Commuters™ list. The program puts the choice squarely in the hands of the commuters themselves by offering a flexible range of options, such as neighborhood vanpools, free shuttle buses to major transportation lines, and showers for those who prefer to bike to work. The company also arranges for extra shuttles during major on-campus events and in special situations such as emergency road closures.

But faced with the growing gridlock problem in the Bay Area (see related discussion under Our Communities, South San Francisco) and the imminent expansion of Genentech's main campus, the company felt that it had to do more. In 2005, Genentech undertook a thorough study of the transportation landscape: What was working well, and what wasn't? What new transportation challenges and opportunities were on the horizon? What were other transportation leaders doing?

The end result of the study was a comprehensive transportation master plan featuring such elements as optimized shuttle service, improved campus transportation amenities, and an innovative parking cash-out option that pays cash to employees who do not drive alone to work. The South San Francisco campus hopes to achieve a 30 percent **mode shift**[17] over the next 10 years under this plan.

Implementation of the plan began in 2006 with a new pilot program called gRide Rewards. This program provides incentives for employees to travel to work without their cars by rewarding them $4 per day for each day that they use an alternative commute mode.

With gRide Rewards, Genentech has led the way in becoming the first company with more than 10,000 employees to implement such a voluntary program. Participation in the program has been growing since its inception in November 2006. In the first month of the program, Genentech registered 1,300 employees and by the end of the third month it registered 1,800 employees - the future of the program looks positive. The program's simple design keeps employee engagement at a high level and it is a model that can easily be transferred to other businesses. For example, the program relies on the honor system and only asks that employees sign an Honor Pledge in order to claim their rewards. The program has also been joined with other innovative programs such as "Genenbus", a wi-fi equipped coach picking up employees in areas such as San Francisco and along the Interstate-80 highway corridor.

Genentech is also committed to using cleaner vehicles where practical. The company has begun replacing some of its on-campus shuttle buses with vehicles powered by compressed natural gas.

The employee commuting program helps Genentech make a positive impact in a number of ways," says Nathan Byerly, Genentech's Employee Transportation Programs Manager. "By getting more cars off the road, we help improve air quality and reduce regional gridlock. At an individual level, employees can choose to relax or be productive during their commute – something not possible if you're driving alone. And finally, we can influence other businesses in the area by demonstrating leadership and sharing best practices."

[17] A switch from single-occupancy vehicle to other modes of travel such as carpool, vanpool or mass transit.

Nathan Byerly in front of a Genentech shuttle. The facility's award-winning employee commuting programs help reduce regional gridlock, improve air quality, and lower greenhouse gas emissions.

Employee Health, Safety and Wellness

Genentech recognizes that protecting the health, safety and wellness of our employees is a natural extension of our commitment to improving the state of human health. To this end, the company has developed extensive programs that promote a safe and healthy workplace. Genentech's safety programs are designed to minimize risk to employees and are tailored to our specific work environments, such as the manufacturing floor, laboratories and office environments. We continually work to raise awareness about safety at our facilities and to adopt enhanced techniques to improve safety performance.

Larry Sanders, a director in Genentech's South San Francisco manufacturing facility, sees the positive impact of the company's employee protection programs in his group "In our manufacturing group, we have a diverse workforce that brings a wide variety of experiences into our plant. We have seasoned veterans from several industries, as well as new graduates without industrial experience. The greatest benefit of a programmatic approach to safety is that we can protect all of our employees regardless of their previous experience and avoid having to re-learn difficult lessons. We can focus on making critical therapeutics for our patients without sacrificing our own well-being."

Health and Safety Metrics

Genentech tracks the following two metrics as measures of health and safety performance at all of its facilities:

Injury/Illness Incident Rate (IIR): The IIR is the rate of injury or illness cases that require medical attention beyond first aid. Commonly referred to as the "Recordable Rate," this is the standard indicator that has been used by the U.S. Occupational Safety and Health Administration (OSHA) for many years and can easily be compared across similar companies.

Days Away/Restricted Time Rate (DART): DART is the rate of injury or illness cases that result in employees missing one or more days of work (lost time), or working at less than full potential (restricted time).

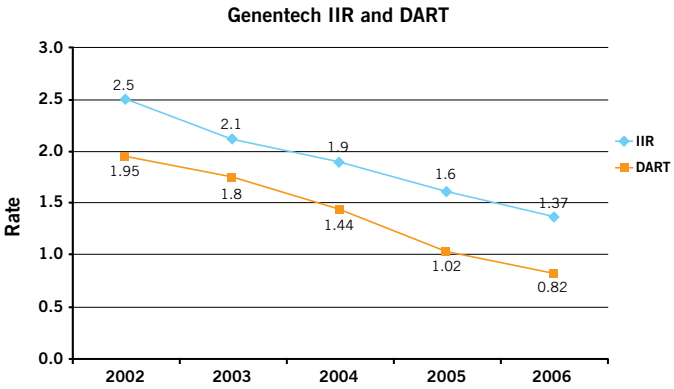
Both IIR and DART are indicators of the rate of incidents per a 100-person population. For instance, an IIR of 5 would indicate that 5 out of 100 employees experienced an injury or illness requiring medical attention beyond first aid over the time period measured.

Why Do We Measure These Things?
The IIR is useful in assessing the frequency of work-related injuries and illness, helping us to identify high-risk areas and taking practical preventive actions before injuries occur. The DART is useful in assessing the severity of those injuries and illnesses so that our risk mitigation measures can be effectively prioritized.

Mike Koehler works inside one of Genentech's low-flow fume hoods. The hoods provide a high level of protection for employees performing chemical work, while conserving energy at the same time.

Our Safety Record

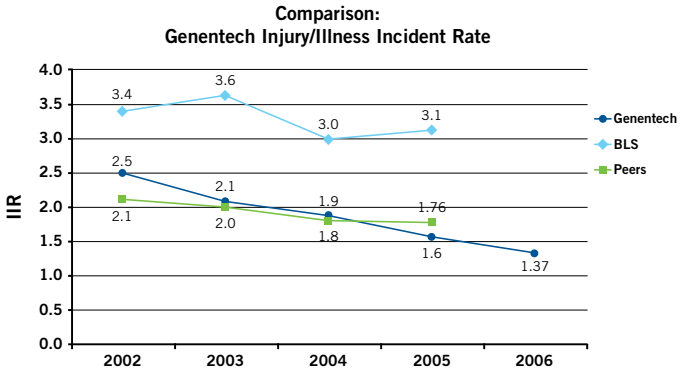
A snapshot of a company's safety record at a single point in time offers a limited understanding of that company's safety performance. It is therefore useful to view the trends in a company's safety record over time. As you can see from the graph below, both Genentech's IIR and DART have been declining over the past four years (the timeline for which we have the most accurate data). This means that accidents, both moderate and severe, are happening less and less frequently. For details on how Genentech achieved these improvements in safety performance, see "Behind the Numbers" below.



It is also illuminating to compare a company's safety statistics against other companies with similar risk profiles. Genentech generally compares IIR against two sources:

- The national average for the biological pharmaceutical products manufacturing industry (NAICS Code 325414), compiled by the U.S. Bureau of Labor Statistics (BLS); and
- The average of a select pool of industry peers ("Peers," in the following graph) with whom Genentech coordinates closely on safety improvements.

The following graph shows that Genentech's IIR is better than the national average for the biological pharmaceutical products manufacturing industry and that our IIR has recently dipped slightly below the average of our pool of industry peers.



Behind the Numbers

Over the years, Genentech has introduced a number of new processes and programs to improve our safety performance. Our improving safety performance validates the effectiveness of our efforts to provide a safe workplace for our employees. Some of our recent safety initiatives include:

- Involving employees directly in annual safety symposiums and employee-led Safety Improvement Teams;
- Conducting job hazard analyses to understand and mitigate the risks associated with different work activities;
- Regularly inspecting work areas for potential hazards and resolving those hazards that are identified;
- Considering safety in the design of new facilities; and
- Developing corporate standards on safety and auditing against these standards.

What's Ahead for Health and Safety?

Looking ahead, Genentech is implementing a new risk management framework known as isrs7. You can learn more about this initiative in the EHS Policy and Management Systems section.

We are further enhancing safety by learning from adverse safety events and monitoring our operations with new **leading metrics**[18], such as safety suggestions and near-misses reported. Additionally, greater safety participation by senior management and a heightened sense of accountability for safety performance at the line management level are integral to our continual improvement.

[18] Metrics that focus on predicting performance improvement, examining the causes of good performance, as opposed to metrics that focus on effects, results or outcomes (known as lagging indicators).

Employee Wellness

Genentech's commitment to its employees' well-being does not stop at the facility borders. The company has a variety of wellness programs to help employees and their families lead healthy lives at home, too. Below are details on some of Genentech's wellness programs:

Health Insurance: Genentech offers its employees a generous range of comprehensive health insurance packages that include medical, dental, vision and wellness coverage.

Flu Shots: Free annual flu vaccinations help keep employees healthy and active during the flu season.

Fitness: Genentech's employees have a variety of options for keeping fit, including company-sponsored health club membership, on-site walking trails, and corporate sports teams. In 2006, Genentech completed construction of Club Genentech, a new corporate fitness facility in South San Francisco (see the "Club Genentech" story).

Weight Watchers ™: Several of Genentech's facilities offer on-site Weight Watchers meetings. Additionally, several of our cafeterias offer Weight Watchers-compatible meal selections.

Smoking Cessation: Genentech reimburses employees for successful completion of smoking cessation programs.

Sponsorships: As part of its commitment to making a positive impact on the community, Genentech and its employees support a number of health and community causes, such as the San Francisco AIDS Walk and the American Cancer Society's Daffodil Days.

Blood Drive: Genentech regularly holds blood drives and enjoys active participation by its employees. The blood is donated to local blood banks where it provides much-needed blood to people in the community.

Diane Fuller, senior occupational health nurse at Genentech's South San Francisco facility describes how Genentech's wellness programs make a positive impact, "Wellness programs such as Club Genentech, Weight Watchers, or the flu vaccination program help support our employees in staying healthy. Having such opportunities onsite encourages participation and demonstrates that Genentech's senior management understands the importance of a healthy, balanced life style."

Diane Fuller at the new Club Genentech, demonstrating the connection between fitness and wellness. The new state-of-the-art gymnasium was built in 2006.

Club Genentech

During 2005, Genentech surveyed its employees about the on-site services they value most highly and one of the top choices was fitness. While Genentech has been helping its employees to keep fit through partnerships with local fitness facilities for a number of years, the feedback prompted an increased investment in employee fitness in the form of a brand-new on-site facility in South San Francisco, known as Club Genentech.

Club Genentech offers a wide range of fitness and wellness options for employees. The Club is a 24,000 square foot facility housing a cycle spinning room, basketball court, sauna, steam rooms and massage. An extensive program is offered, including group exercise and yoga classes, personal training and sports leagues. Membership is free for Genentech employees and is available to contractors and families of employees for a small fee. The Club enjoys a level of high level of participation and membership continues to be on the rise.

Maureen Truluck of Employee Services is responsible for Club Genentech and is working closely with the Health Services team to further integrate wellness activities and options for employees. For example, planned for 2007 are sessions to be provided jointly by an on-site chef and a personal trainer from the Club with the aim of further increasing employee awareness about healthy eating and exercising.

Genentech's commitment to employee fitness extends beyond South San Francisco. The company provides free membership to a local sports club for its Vacaville employees and has recently contracted with a local YMCA to provide free fitness facilities for its Oceanside employees. Any Genentech employee not located at one of the company's three main facilities receives up to $600 annual reimbursement towards the costs of fitness activities.

Data & Notes

Over the past several years, Genentech has experienced tremendous growth. Demand for our oncology products has significantly increased over the period of this report, with our overall product sales increasing 46 percent from 2004 to 2005, and 39 percent from 2005 to 2006.

As a result of this dramatically increased demand, we have significantly increased our production capacity and the size of our organization, growing from 7,646 employees at the end 2004, to 9,563 and 10,553 employees at the ends of 2005 and 2006, respectively.

One impact of this growth in production and population has been a significant increase in the size and capacity of our manufacturing and other facilities and, with that, a resultant increase in our greenhouse gas emissions, water use and several other environmental indicators, as we report in the data tables below.

While we have had some absolute numbers increase, our commitment to sustainability and our efforts to become more efficient have helped minimize these increases. As discussed in this report, we are well on our way to meeting our 2010 goals for reductions in greenhouse gases and water use.

Inputs and Outputs	Units	Total	South San Francisco, USA	Vacaville, USA	Porriño, Spain
Total Water Use	m^3				
2005		1,632,628	1,053,883	491,630	87,115
2006		2,006,675	1,268,821	629,880	107,974
Direct Energy Use	1000 GJ				
2005					
Electricity		706	554	126	26
Natural Gas		700	572	128	0
Diesel Fuel		30	2	1	27
2005 Total Direct Energy Use		1,435	1,128	255	52
2006					
Electricity		760	581	150	29
Natural Gas		791	669	123	0
Diesel Fuel		43	5.8	2.75	34
2006 Total Direct Energy Use		1,594	1,256	275	63
Energy-Related Greenhouse Gases	Metric tons CO_2 equivalent				
2005 Direct Emissions					
Natural Gas		35,124	28,701	6,423	0
Diesel Fuel		2,044	112	100	1,832
2005 Indirect Emissions					
Electricity		71,804	56,300	12,784	2,720
2005 Total Energy-Related GHG Emissions		108,972	85,113	19,307	4,552
2006 Direct Emissions					
Natural Gas		39,710	33,559	6,151	0
Diesel Fuel		2,900	402	190	2,308
2006 Indirect Emissions					
Electricity		77,396	59,062	15,201	3,133
2006 Total Energy-Related GHG Emissions		120,006	93,023	21,542	5,441

Inputs and Outputs	Units	Total	South San Francisco, USA	Vacaville, USA	Porriño, Spain
Transportation-Related Greenhouse Gases	Metric tons CO_2				
2005					
Business Travel (Road)		8,973			
Business Travel (Air)		17,179			
Total Transportation-Related GHG Emissions		26,152			
2006					
Business Travel (Road)		10,418			
Business Travel (Air)		19,797			
Total Transportation-Related GHG Emissions		30,215			
Volatile Organic Compound (VOC) Emissions	Metric tons				
2005		18.7	14.6	3.6	0.5
2006		21	17.5	3.2	0.63
Hazardous Waste (including US Regulated waste)	Metric tons				
2005					
Incineration		332	293	36	2.3
Landfill		110	98	8	3.9
Recycled		30	28	2	0.4
Other Treatment		1,815	367	1,448	0
Total Hazardous and other US Regulated Waste		2,288	787	1,494	6.6
2006					
Incineration		414	390	21	3.5
Landfill		3,068	3,038*	26	3.7
Recycled		25	20	4	0.2
Other Treatment		2,499	659	1,840	0
Total Hazardous and other US Regulated Waste		6,006	4,107	1,891	7.4

* The reason for the large increase in landfilled hazardous waste during 2006 is due to a ground excavation project completed by Genentech as part of a brownfield development. This project resulted in the excavation of 2,971 metric tons of soil containing naturally occurring asbestos. Removal of this waste stream from the figures results in a total 2006 South San Francisco hazardous waste figure of 1,136 metric tons and a total Genentech-wide hazardous waste figure of 3,035 metric tons.

Data & Notes

Inputs and Outputs	Units	Total	South San Francisco, USA	Vacaville, USA	Porriño, Spain
Non-Hazardous Waste (excluding US Regulated waste)	Metric tons				
2005					
Incineration		0	0	0	0
Landfill		3,089	2,797	218	73
Recycled		1,454	1,270	183	2
Total Non-Regulated Waste Generation		4,543	4,067	401	75
2006					
Incineration		0	0	0	0
Landfill		3,409	3,260	66	83
Recycled		2,960	2,776	177	7
Total Non-Regulated Waste Generation		6,369	6,036	243	90
Non-Hazardous Waste Recycling Rate	%				
2005		32	31	46	2.6
2006		46	46	*	7.7
Safety Metrics					
2005					
Injury/Illness Incident Rate	–	1.6	–	–	–
Days Away / Restricted Time Rate	–	1.02	–	–	–
2006					
Injury/Illness Incident Rate	–	1.37	–	–	–
Days Away / Restricted Time Rate	–	0.82	–	–	–

* The method for estimating non-hazardous waste at Vacaville differs between 2005 and 2006 due to a change in measurement technique introduced by the waste contractor. During 2007, we will investigate the effects of these changes on the comparability of the 2005 and 2006 non-hazardous waste figures.

Notes to Support the Data Table

- In order to balance the value of data against the cost of gathering that data, Genentech uses a de minimis threshold of 5 percent.
  - If a particular activity contributes less than 5percent to one of our environmental metrics, that activity is generally excluded from this report.
  - If a facility falls beneath this de minimis threshold for all environmental metrics, that facility is generally excluded from this report and viewed as de minimis..
  - *Note: For greenhouse gas metrics, we have applied the definition of de minimis given in the California Climate Action Registry Protocol.*
- Unless otherwise stated, the data presented in this report are for all three of our production facilities – South San Francisco and Vacaville, California, and Porriño, Spain – in operation throughout 2005 and 2006, as well as the research, development, commercial and administrative offices at our South San Francisco headquarters. All reported data are for the 2005 and 2006 calendar years.
- To ensure the quality of reported data, Genentech has a policy of internally tracking data at new facilities for two years before publishing for the public. Genentech's new facilities, such as Oceanside, California, are planned to be included in future issues of this report after this two-year period.
- All figures on the Data Table, with the exception of figures > 20, are rounded to the nearest whole number. Due to this rounding, the individual elements of the Data Table may not always add up to the totals.
- All electricity, natural gas and water data are based on meter readings extracted from the utility suppliers' bills (using billing periods January - December, inclusive). Data are presented for buildings owned and occupied by Genentech. No data are shown for buildings which Genentech owns and leases out to third parties.
- The following notes relate to specific metrics presented in the data table.

Total Water Use

- South San Francisco's 2004 water figure was increased from 1,085,012 cubic meters (m3) to 1,085,087 m3 to reflect a slight adjustment in conversion calculations.
- Vacaville's 2004 water figure was increased from 419,620 m3 to 481,919 m3 based on more accurate data that became available after publication of the 2004 report.
- The data include potable and non-potable water consumption. During 2005, Vacaville was the only facility to use non-potable water, used primarily for irrigation use and cooling processes. This water supply represents 12 percent of Vacaville's total water consumption during 2005.

Direct Energy Use

- The 2004 diesel gigajoule (GJ) figures have been revised for all facilities to account for a more accurate conversion from gallons of diesel used to gigajoules of energy produced. This has resulted in an increase from the original 28,000 GJ to a new 29,000 GJ.

Energy-Related Greenhouse Gases (GHG)

- These data present **direct greenhouse gas emissions**[19] associated with the use of natural gas and diesel fuel by Genentech's production facilities, and **indirect greenhouse gas emissions**[20] associated with the use of electricity.
- The GHG data are shown as carbon dioxide (CO_2) equivalents, which includes carbon dioxide, nitrous oxide and methane emitted during the energy production activity.
- 2004 GHGs were re-calculated to reflect modifications in the California Climate Action Registry's (CCAR) General Reporting Protocol and specifically a switch from the use of a State level CO_2 conversion factor for electricity to a regional (WECC) conversion factor. Genentech considers the regional factor to be more accurate as it reflects the fact that a significant amount of electricity used in California is imported from other states. GHGs from Porrino's use of electricity in 2004 were also re-calculated to reflect an updated conversion factor.

[19] Emissions from sources that are owned or controlled by the reporting entity, in this case, Genentech.

[20] Emissions that are a consequence of actions of the reporting entity (in this case, Genentech), but are produced by sources owned or controlled by another entity (in this case, the utility supplier).

- The re-calculated GHGs for 2004 (shown as metric tons CO_2 equivalents) are as follows:

	Total	SSF	Vacaville	Porrino
Natural Gas	36,417	30,089	6,328	0
Diesel Fuel	2,022	130	59	1,833
Electricity	69,202	55,059	11,736	2,407
Total	**107,641**	85,278	18,123	4,240

- The emissions factors used to calculate the energy-related greenhouse gases are shown in the tables below.

Electricity-Related CO_2 Emissions Factors (by site)

Site	Emissions Factor	Source
South San Francisco and Vacaville	0.805 lb/kwh	A regional emission factor (WECC) was used in line with guidance given in Version 2 of the California Climate Action Registry Protocol. Original source: U.S. EPA Emissions & Generation Resource Integrated Database E-grid http://www.epa.gov/cleanenergy/egrid/index.htm
Porriño	0.383 kg/kwh	Emission factor for Spain from Worldwide Emissions Factors, The GHG Indicator: http://www.uneptie.org/energy/tools/ghgin/docs/GHG_Indicator.doc Original source: International Energy Agency "Carbon dioxide emissions from fossil fuel combustion 1971-1984"

In accordance with the CCCAR Protocol, CO_2 equivalents for CH_4 and N_2O emissions arising from electricity generation were included in the overall electricity related CO_2 equivalent calculations for Vacaville and South San Francisco. The following emissions factors were used:

Electricity-Related CH_4 and N_2O Emissions Factors (South San Francisco and Vacaville)

Unit	Methane (CH_4)	Nitrous Oxide (N_2O)	Source
Lbs CO_2/MWh	0.0067	0.0037	California Climate Action Registry Protocol Version 2 Appendix C, Table C2. Original source: U.S. Department of Energy, Revised/Updated State-level Greenhouse Gas Emission Factors for Electricity (February 2000), http://www.eia.doe.gov/oiaf/1605/e-factor.html.

Natural Gas-Related CO_2 Emissions Factors (South San Francisco and Vacaville)

Emissions Factor (kg CO2/therm)	Description & Source
5.2785	This is a United States-wide emission factor used in Version 2 of the California Climate Action Registry Protocol. Original source: U.S. EPA, "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2000" (2002), Table C-2, page C-2.

Natural Gas-Related CH_4 and N_2O Emissions Factors (South San Francisco and Vacaville)

Unit	Methane (CH_4)	Nitrous Oxide (N_2O)	Source
Kg/MMBtu	0.0059	0.0001	California Climate Action Registry Protocol Version 2 Appendix C, Table C2. Original source: U.S. Department of Energy, Revised/Updated State-level Greenhouse Gas Emission Factors for Electricity (February 2000), http://www.eia.doe.gov/oiaf/1605/e-factor.html.

Diesel-Related CO_2 Emissions Factors (all sites)

Diesel Fuel	Emissions Factor	Source
kg CO_2/gallon	10.05	This is the emission factor used in the 2002 version of the California Climate Action Registry Protocol. Original source: California Energy Commission, Inventory of California Greenhouse Gas Emissions and Sinks: 1990-1999 (December 2001), Tables 2-5 & 2 -6, pages 33-34; and Energy Information Administration, Emissions of Greenhouse Gases in the United States 2000 (2001), Table B1, page 140, http://www.eia.doe.gov/oiaf/1605/ggrpt.
kg CH_4/gallon	0.0014	These are the emission factors used in the 2002 version of the California Climate Action Registry Protocol. Original sources: "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2000" Annex C Table C-2: CH4 and N2O Emission Factors by Fuel Type and Sector and Annex W Table W -2: Conversion Factors t o Energy Units (Heat Equivalents] (EPA, 2002. U.S. Environmental Protection Agency, Washington, D.C. April. EPA -236-R-02-003).
kg N_2O/gallon	0.0001	

Global Warming Potential (GWP) Factors For Conversion From Tons CH_4 and N_2O to Tons CO_2 Equivalents (all sites and all sources)

Emission	GWP compared with GWP of CO_2	Source
CH_4	21	2002 version of the California Climate Action Registry Protocol. Original source: IPPC Second Assessment Report; Table 5-2, Chapter 5, 1995
N_2O	310	

Transportation-Related Greenhouse Gases (GHG)

- Business travel:
  - The road travel data present CO2 emissions arising from U.S.-based road travel by Genentech employees for business purposes. The air travel data present CO2 emissions arising from flights made by Genentech employees, which originated in the U.S, and which were booked through Genentech's official travel agency; travel booked through alternative means is not included.
  - The road travel emissions calculation was made using a conversion factor of 0.39 kg CO2/vehicle mile for a medium-sized gasoline vehicle (taken from the World Resource Institute's Mobile Combustion Emissions Tool 2005). This factor is updated from the 0.36 factor used in our 2004 report. The calculation is based on a total of 22,890,486 miles traveled during 2005.
  - The air travel emissions calculation was made using a conversion factor of 0.20kg CO2/mile for medium haul flights (taken from the World Resource Institute's Mobile Combustion Emissions Tool 2005). The calculation is based on a total of 84,722,597 miles traveled during 2005.
- Fleet GHG
  - We have discontinued tracking GHG from Genentech's on-site fleet because these emissions fell beneath Genentech's 5 percent de minimis threshold. The de minimis threshold is intended to allow Genentech to maintain focus on environmental metrics of significant magnitude.
  - The trend in total transportation GHG was calculated by excluding the fleet GHG 2004 figure to allow a comparison.

Volatile Organic Compound (VOC) Emissions

- VOC emissions figures only reflect solvent wipe cleaning associated with manufacturing. Other sources of VOCs (such as boilers and generators) are excluded.
- The products included in the data are alcohol wipes, solution (70 percent alcohol/30 percent water) and reagent alcohol. The solvent types represented are ethanol, methanol and isopropanal.
- The data are based on an assumption that 100 percent of the solvent used by Genentech is emitted to air as VOCs. In practice, the actual VOC emissions are likely to be lower because some solvent will be retained on used wipes.

Hazardous Waste (Including U.S. Regulated Waste)

- In 2004, we provided data on a specific type of regulated waste generated by our production facilities, known as TMAC. The 2005 and 2006 data sets have been expanded to include all types of wastes which are regulated as hazardous by the relevant authorities for each of our facilities as well as non-hazardous wastes that are regulated in the US, including medical waste, radioactive waste and universal waste. Because of the change in scope, no trend is shown for 2005 vs. 2004 data sets.
- The quantity of TMAC contributes significantly to the total hazardous and regulated waste figure. TMAC is an aqueous waste which is sent for special treatment at an off-site wastewater treatment plant.
- The SSF hazardous waste figures are based on data provided by the waste contractor with the exception of data for asbestos and glassware (both landfilled). The manifest documents were used as the data source for these 2 waste streams.

Non-Hazardous Waste Production (Excluding U.S. Regulated Waste)

- The data are for all waste types that are not classified as hazardous by local legislation or by Genentech's Corporate EHS Standards on Hazardous Chemical Waste and Regulated Biological Waste. The data also excludes waste types that are classified as regulated in the U.S.
- The data are based on actual weights where these are available (e.g., compactors) and otherwise estimated weights using an average weight per container combined with the number of container pick-ups during 2005.
- Recycling rate (%) is the total weight of recycled waste divided by the total weight of non-regulated waste x 100.

Injury and Illness Rate (IIR)

- IIR is measured as the number of injuries/illnesses that resulted in medical attention beyond first aid, divided by the total number of hours worked by all employees in the past year. The number is then multiplied by 200,000 (the number of hours that 100 employees would work in a year). This last step allows easy comparison with statistics used by other companies and the government. The equation for calculating the IIR is:

$$\frac{\text{Number of injuries/illnesses that resulted in medical attention beyond first aid} \times 200{,}000}{\text{Total hours worked by all employees in the past year}}$$

Days Away/Restricted Time Rate (DART)

- The DART is measured as the number of injuries and illnesses that resulted in an employee missing one or more days of work or working with restrictions for one or more days, divided by the total number of hours worked by all employees in the past year. As with the IIR, the number is then multiplied by 200,000 (the number of hours that 100 employees would work in a year). The equation for calculating the DART is:

$$\frac{\text{Number of injuries/illnesses that resulted in an employee losing one or more days of work, or working one or more days with restrictions} \times 200{,}000}{\text{Total hours worked by all employees in the past year}}$$

Invitation To Comment

Readers can provide feedback and comments 24 hours a day through our website at www.gene.com. Comments received will be directed to subject matter experts within the company.

Questions Received From Last Year's Report

Since its launch in September 2005, our 2004 Corporate Environmental Performance Report web page has received several thousands of visitors. A number of readers submitted questions. Below are some of the topics that readers asked about:

Solar: Some readers asked whether Genentech has evaluated solar power as a means to achieve its greenhouse gas reduction goal. In fact, Genentech has evaluated a number of solar power projects; but to date, none has met our internal threshold for returns. We continue to evaluate the merit of solar and other energy projects on a case-by-case basis as a potential means of meeting our goals.

Mass Transit: One reader asked for more information about Genentech's use of mass transit. You can find out details on Genentech's employee commuting programs earlier in this report under Environmental Commitment.

Cafeteria: A reader asked whether Genentech has evaluated ways to make its cafeterias greener. You can find out about our Cafeteria greening program in the feature story in the Environmental Commitment section.

9 April 2007

Third-party Data Review Statement

WSP Environmental Strategies has completed an independent review of the Environmental, Health and Safety (EHS) data contained within the Genentech Sustainability Report.

Scope and Objectives
The objective of the review was to assess the accuracy and reliability of the quantitative data contained within the Data Table section of the Genentech Sustainability Report.

The review covered:

- All EHS metrics listed in the Data Table
- Genentech-derived data for 2005 and 2006
- Facility level data as well as company wide totals
- Conversion factors used to calculate greenhouse gas emissions

The review has assessed the relationship between the raw data generated by Genentech data owners and the quantitative information presented in the Sustainability Report Data Table, with specific attention to calculations and conversions carried out in order to present data against the Genentech EHS metrics. The review did not interrogate the accuracy of the raw data, nor did it extend to any factual statements or other information contained within the Sustainability Report.

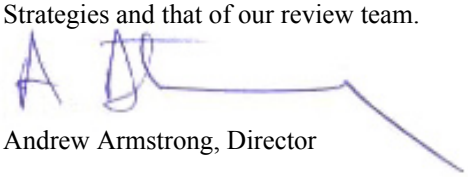
Methodology
The assessment was completed through document review and discussions with the personnel responsible for collating the raw data and for completing conversions and calculations necessary to generate data in accordance with the Genentech metrics.

The work included checking for errors due to the manual transfer of data between documents, testing the formulae built into calculation tools and reviewing the conversion factors used for their appropriateness. Calculations were repeated in order to assess their accuracy.

Opinion
On the basis of the methodology described and the review work performed, and assuming the veracity of the raw data which forms the basis for the EHS metrics, we are satisfied that the data contained within the Genentech Sustainability Report are accurate and reliable.

About the Assessors
WSP Environmental Strategies is part of the global WSP Environmental consultancy, which employs over 1000 professionals and provides environmental and sustainability services to companies throughout the USA, Europe, Asia and Australia. WSP Environmental is committed to deliver quality, innovation and leadership in our areas of expertise.

The review team does not have any involvement in any other projects with Genentech and we do not consider there to be a conflict between the other services provided by WSP Environmental Strategies and that of our review team.



Andrew Armstrong, Director