Lucent Technologies
Bell Labs Innovations

1996 Environment, Health & Safety Report

Second Nature at Lucent Technologies



Our commitment: Care for the environment, health and safety will become **second nature** - integrated into all our business processes.

Heritage of 127 years. An independent company since October 1, 1996.

Our job: provide our customers with the world's best and most innovative **communications systems** , products, technologies and support.

121,000 employees - nearly 20% of them outside the United States.

Business volume **$23-billion** a year. A Fortune 35 company.

At our **heart** is our research arm, **Bell Laboratories.**

Also four **businesses** that focus on today's revolution in communications:

Network Systems - provides public networking systems and software to telecommunications providers and cable companies around the world.

Business Communications Systems - develops, manufactures, markets and services advanced communications products and systems for businesses.

Microelectronics Group - designs and manufactures high-performance integrated circuits, opto-electronic components, and power systems for telecommunications and computing.

Consumer Products - designs, manufactures, sells, services and leases communications products for consumers, small businesses and mobile callers.

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600 Mountain Avenue
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Lucent Technologies
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Letter From the Chairman and President



To achieve our business objective - We make the things that make communications work.[TM] - our company has many relationships. One of these is with customers who use our products and services. Other relationships are also vital. We operate within communities. We use resources and interact with the physical environment. We rely on the talents and energy of our people, whose health and safety sustains our innovation and productivity.

In all our relationships, acting responsibly is the right thing to do. It shows up on the bottom line because acting responsibly inspires the trust of customers, employees and investors.

- Our responsibility to our communities includes protecting the physical environment.

- Our responsibility to employees requires safeguarding their health and safety.

- Our responsibility to customers means providing goods and services that are safe, energy-efficient, and environmentally preferable.

- Our responsibility to shareowners means minimizing risk and liabilities.

Our "second nature" must accord with the requirements of nature itself. We add value to the products we sell by taking account of the systems in which our products' life cycles occur. Increasingly, we design for the

environment just as we design for performance, manufacturability, testability, reliability, and quality.

Lucent Technologies was separated from AT&T during 1996, becoming a totally independent company on October 1. In this first Environmental, Health, and Safety Report, Lucent Technologies is pleased to report the progress we sustained during this year of transition. We build from a strong history of performance in the environmental, health and safety (EH&S) arena and are aggressively moving to improve.

We build from a strong history of performance in the environmental, health and safety (EH&S) arena.

- We continued a heritage of goal setting by committing to achieve key targets by the year 2000. A systems approach, driven by tangible goals, will enable us to be among the best in EH&S performance while enhancing other fundamental business capabilities.

- Operating units began establishing environmental management systems based on recognized standards. The aim is for a systematic approach to environmental performance that helps qualify our products for sale everywhere.

- Our Environmental Heroes program created visibility for the people and programs in our business whose responsible action we want others to emulate.

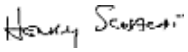
- In worker safety, nine major Lucent manufacturing locations have achieved STAR or MERIT status in the United States Occupational Safety and Health Administration, Voluntary Protection Program (VPP).

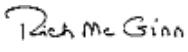
- Lucent is considered an "Energy Star" Ally by the United States Environmental Protection Agency for helping our customers manufacture energy-efficient computers.

- Our recently launched Quality Health Care System facilitates reporting on employee health, streamlining the management of benefits and compensation and providing accurate and timely data to drive health and safety management improvement programs.

In these pages we detail the status and progress of our commitment to environment, health, and safety. We're proud that this first report from Lucent Technologies presents an already strong baseline and movement toward goals set in the past. And we pledge continued movement toward making environment, health and safety an integral part of our business processes.







Henry B. Schacht

Chairman and
Chief Executive Officer

Richard A. McGinn

President and
Chief Operating Officer

Lucent Technologies
Bell Labs Innovations

Lucent Technologies Environment, Health and Safety Policy

Policy

Lucent Technologies is committed to protecting the environment and the health and safety of our people, our customers and the communities where we operate. Meeting this commitment is a primary management objective and the individual and collective responsibility of all Lucent employees worldwide. To that end, we shall:

Comply with all applicable environmental, health and safety laws, regulations and Lucent's Global EH&S standards

Establish management systems for environment, health and safety based on recognized standards, and set company-wide goals for continual improvement

Integrate environment, health and safety into our business plans and decisions - including the design, production, distribution and support of our products and services

Ensure that our products are safe, and work with suppliers and customers to promote responsible use throughout their life cycle

Reduce environmental impact

and conserve natural resources by minimizing waste and emissions, reusing and recycling material, and responsibly managing energy use

Motivate and prepare all employees to take personal accountability for protecting the environment and creating a safe and healthy workplace

Be a leader in deploying and promoting innovative, cost-effective environmental, health and safety technologies and procedures both within and outside the company.

We will regularly review and improve this policy, communicate it to employees, and make it available to all stakeholders.



Lucent Technologies recognizes that the key to a long-term, effective program in environment, health and safety is a set of supportive management systems

Compliance with regulatory, legal and customer standards is the first requirement of EH&S in Lucent Technologies. To ensure continuing compliance with these standards, we are deploying discipline in the form of management systems for environment, health and safety. **Lucent Technologies has the goal of implementing environmental, health and safety management systems for at least 95 percent of our products, services, operations and facilities by the year 2000.**

These systems begin with the Lucent EH&S policy (page 4). The policy requires the establishment of EH&S management systems that include procedures to:

- identify potential impacts

- set objectives and targets

- establish training and programs to meet targets

- audit the programs and

- report to top management to ensure improvement.

Complying with high standards requires a management system that asserts clear leadership.

With a management system, responsible practices for environment, health and safety take their place as integrated elements in budgets and business planning processes. Complying with high standards requires a management system that asserts clear leadership and results in practices with a defined focus. This is the means by which managing for environment, health and safety truly becomes "second nature" within Lucent's business processes.

To date, 13 percent of Lucent's operations have implemented health or safety management systems based on recognized standards. This is more than double the rate

in 1995, the baseline year. A total of 13 Lucent locations, including all those of the Microelectronics Group, have established certified environmental management systems. Many others have EH&S management systems expected to evolve to or match recognized standards in 1997.

ENVIRONMENTAL LEADERSHIP

Progress toward implementing environmental management systems to date includes the following:

- Lucent's Microelectronics Group has gained business-wide ISO14001 certification (early 1997) for its 10 manufacturing and design locations in six countries as well as its headquarters location. The Group was invited to participate with a handful of companies to showcase a United States Environmental Protection Agency regulatory re-invention program called Project XL ("excellence in leadership"). The Microelectronics project uses the environmental management system to streamline regulatory reporting and permitting, saving resources for substantive compliance activities.

- Lucent's Network Systems unit gained ISO14001 certification of its production facilities in Madrid, Spain, and Rouen, France, in 1996. Three other Lucent Network Systems locations outside the United States are currently piloting ISO14001-based management systems.

- Business Communications Systems is working toward environmental management system certification for its headquarters and R&D operations by the end of 1997.

- Other efforts are under way in the remaining units of Lucent Technologies.

Four key elements in Lucent's compliance assurance are aimed at sustaining environmental leadership:

- corporate audits

- unit self audits

- annual compliance report

- assurance letter process.

These elements ensure that adequate resources are dedicated to solving any problem, with a systematic correction applied consistent with Lucent's quality improvement principles. The assurance letter is the final rung in the compliance management ladder. As top management learns of problems and challenges, they become involved in

challenges, they become involved in addressing them. In the assurance letter, the head of a unit outlines the management systems, training, personnel and funding dedicated to compliance objectives. The letter also specifies any actual or potential EH&S issues that could materially impact human health or the environment.

The Lucent Global EH&S center monitors EH&S performance throughout the business. It partners with EH&S officers in every operating unit. Together, they work on integrating EH&S goals into business and operational plans.

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What is an Environmental Management System?

A management system is key to making "second nature" the management and continuous improvement of the environmental aspects of our business processes.

An environmental management system is a set of policies, programs, procedures and processes by which an organization assures itself (and others, when asked) that its business practices enable it to comply with environmental requirements - whether imposed by law, by customers, or by the organization itself. Since standards constantly evolve, an environmental management system must be flexible and robust in order to identify and deploy appropriate responses to new requirements.

A number of international environmental management system models exist. One, called ISO 14001, has been developed and endorsed by the International Organization for Standardization (ISO). Many Lucent units expect to align their practices with this standard, and some have already. Market requirements may in some cases dictate the selection of a different environmental management system model.

Increasingly, our customers require that we have systems such as ISO 14001 in place. Some customers, notably in Western Europe, are making an environmental management system a requirement for doing business. Lucent Technologies also will increasingly expect disciplined environmental management from its own suppliers. Lucent locations have earned ISO 14001 certification.

Lucent Technologies has committed to applying a management system approach to the management of health and safety as well. This supports our objective of integrating all EH&S considerations into our business processes.

Management Systems

AUDIT PROGRAM

Integrated environmental, health and safety audits are a central element of Lucent Technologies' compliance assurance process. The audits evaluate compliance with legal and company requirements and identify areas for improvement. Lucent employs trained internal auditors as well as external consultants to conduct environmental, health and safety audits.

"The Lucent Global EH&S center helps pull together each business unit's best EH&S practices so they can be shared company-wide, benefiting all our stakeholders."
- John C. Boram

The audit program applies to both Lucent-owned locations and to joint ventures in which Lucent holds a majority interests or has operating control. One audit process applies to manufacturing and research and development sites, another to administrative locations. The process for administrative locations was redesigned in 1996. Auditing for environmental management systems under the ISO14001 standard also began in 1996, and 30 Lucent employees received training in auditing to this standard.

As a global company, Lucent addresses the differing legal requirements in countries where it operates. In all locations, we audit for compliance with local laws and regulations as well as Lucent's own worldwide EH&S standards.

Manufacturing/R&D Audits
In 1996, 28 manufacturing and R&D locations were audited. Several new and acquired facilities were audited for the first time while others of higher risk profile underwent their fourth audit since 1990. All facilities performed satisfactorily. In general, average audit performance has risen since 1990. Lucent's Global EH&S center tracks local follow-up on improvement items coming out of the audits to ensure completion.

Administrative Audits
In 1996, 76 administrative locations were audited under a new audit protocol. While nineteen of these locations demonstrated performance that requires improvement, there were no open items following the

audit that posed a material risk to the environment or human health. In the organization that operates most administrative locations, Lucent Real Estate, an aggressive program is under way to enhance performance and establish accountability for corrective action. Opportunities for improvement are in the areas of safety, fire protection and certain aspects of industrial hygiene. Follow-up is being tracked.



John C. Borum
Product Realization Vice President,
Network Systems;
Global EH&S Vice President (1996)

AUDIT ACTION-ITEM COMPLETION

The post-audit corrective action process has improved significantly since a formal follow-up mechanism was introduced in 1993 for manufacturing and R&D locations. The average time to achieve 100-percent closure of documented gaps has decreased by 44 percent from 1993 levels for audits performed in 1995. The 1996 audits reflect an ever improving, though not yet conclusive, trend.

Locations participating in audits report a high level of acceptance of the audit process - again evidence that support for the environment, health and safety is becoming "second nature" throughout Lucent Technologies.

REMEDIATION

Lucent is conducting environmental remediation of several of its own sites and is also involved as a potential responsible party at a number of Superfund sites. These remediations are the result of activities that took place many years ago, when the environmental impact of the handling and use of certain materials was not well understood; the practices that gave rise to the need for these cleanups were lawful at the time. Lucent actively manages its operations to prevent potentially harmful releases of materials to the environment.



HEALTH PERFORMANCE

Guarding employees against illness or injury in the workplace and helping them to recover quickly in the event of injury or illness are the guiding objectives for workplace health and safety in Lucent Technologies. Work itself, which provides social structure and ego support, is intrinsically therapeutic. The workplace that promotes well-being and rapid recovery returns benefits both to employee and employer.

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Lucent Technologies has 22 clinics dedicated to keeping employees productive by assisting them with illness or injury whether it be occupational or non-occupational in origin.

Quality Health-Care System
Lucent launched a new health care system in 1996. This confidential system supports and enhances the quality of on-site care delivery. Fundamentally the quality health-care system is a database system built around medical charting that facilitates reporting on employee health and streamlines the management of benefits, workers' compensation and safety. It also enables management to assess need for new preventative practices. Developed internally, the quality health care system is currently deployed across Lucent in the United States.

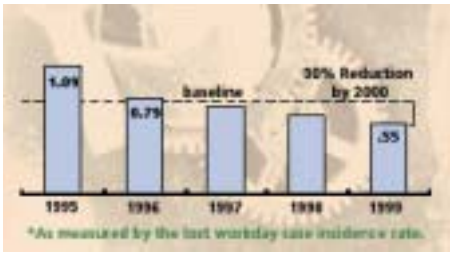
An employee record begins when an accident or other incident is reported to the medical department. The records are immediately available to the benefit office and safety program management. Lucent nurses access the records as they monitor employees on disability. The integrated system automatically generates reports for the United States Occupational Safety and Health Administration and records injuries by organization and location.

As applicable, the quality health care system will form the basis for data collection in other countries where Lucent operates. It will help to bridge global language barriers

as inputs made in a variety of languages will be automatically translated and added to the database in English.

Fitness and Wellness
Lucent is pursuing a program to make fitness facilities available to its employees. The objective is twofold: first, to improve general health, productivity and well-being; and also for employee physical therapy, minimizing health care costs and work time lost due to disability.

Lucent also offers stress management programs and activities. Many studies support the value of fitness and stress reduction as an adjunct to both employee health and productivity.



Safety Goal: 30% Reduction of Lost Workday Accident Rate* by 2000

SAFETY GOALS

In 1996 Lucent globally achieved a 27 percent improvement in the lost workday case incidence rate and a 28 percent improvement in the total case rate. The business experienced one fatality during 1996 at its Network Switching Systems, Ltd., unit in India. On-the-job fatalities are infrequent in Lucent's operations and are regarded as important events with both business and human implications. When a fatality occurs, senior leaders in our operating units conduct a detailed review and, where circumstances warrant, immediately implement preventive measures. Those preventive measures are then deployed across all of Lucent's global operations.

Lucent's key health and safety goal is to reduce the lost workday accident rate by 30 percent below the baseline 1996 rate by the year 2000 as a step toward our long-term objective of zero on-the-job injuries. This is a new goal - the first new EH&S goal following the formation of Lucent Technologies - and it demonstrates the company's commitment to its people. The reporting methodology employs the United States Occupational Safety and Health Administration lost workday case-incidence rate, a widely used industry standard.

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Design for the Environment



An emerging objective in Lucent Technologies is to create products that not only function optimally but are also "designed for the environment." **As a goal, Lucent aims to develop and apply design for the environment criteria for all its operating units by the year 2000.**

The Lucent Global EH&S center has issued guidelines in designing for the environment.

This is a complex challenge and Lucent's people are its pioneers. While no one can foresee the future, there is an increasing effort to take into account such issues as waste in manufacture and packaging, energy of manufacture and use, and recycling potential or reusability at the end of a product's life.

To date, 20 products have been subjected to an "environmentally responsible product" evaluation using methodology developed internally. Product and marketing people together with environmental experts brainstorm and apply analytic techniques to address the environmental and use aspects of a product during its projected life. We believe Lucent Technologies is among the leaders in this endeavor, with tools and theoretical aids for helping to make environmental design "second nature" among engineers and developers.

The Lucent Global EH&S center, with the technical support of Bell Labs and Lucent's Engineering Research Center, has issued guidelines in designing for the environment. Other developments in recycling and reuse within Lucent include:

- We operate an equipment reuse and refurbishment program in our factory in North Andover, Mass., where major telecommunications product lines are made. Besides meeting environmental objectives, the program also generates profitable revenue.

- Lucent's Business Communications Systems unit repairs and refurbishes

business telephones as part of its regular practice.

- Lucent's Consumer Products business, which makes telephones and answering machines, has instituted a customer battery-return program.

- Lucent manages a Material Reclamation Center in Indianapolis for its own and other companies' materials. At the end of a product's useful life, its materials are shredded, and the raw materials are reclaimed or recycled for use as raw materials.

- Bell Labs and the Lucent Engineering Research Center are developing technology and applications for taking back and reusing materials.

- We have recently adapted the environmentally responsible product evaluation to apply to packaging. This has resulted in the preparation of packaging reduction guidelines and checklists. A trial project for reusable packaging between two Lucent manufacturing locations, based on the above methodologies, is estimated to save $175,000 annually.

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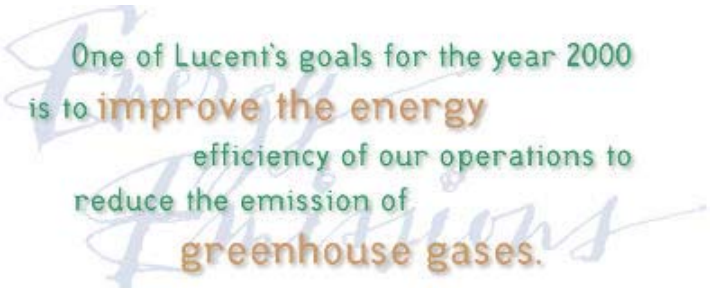
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Energy use is targeted for environmental gains in Lucent Technologies. Energy use worldwide is the single largest contributor to the buildup of "greenhouse" gases in the atmosphere. These are the materials that may be responsible for trapping heat in the atmosphere at higher than historic levels. **One of Lucent's goals for the year 2000 is to improve the energy efficiency of our operations to avoid what would otherwise be the emission of at least 135,000 metric tons of greenhouse gases.** Though stated in terms of emissions (primarily carbon dioxide), the focus is on improving the energy efficiency of Lucent's portfolio of facilities worldwide. From a baseline level in 1992, about half the target has been achieved by 1996.

Lucent is also sustaining the gains it has made in reducing reportable toxic air emissions — a decline of 96 percent from 1987 to 1994.

ENERGY

Lucent's energy goal requires improving the energy efficiency of its facilities, including factories, labs, offices and warehouses. Each Lucent operating unit is responsible for its portion of the progress toward the overall greenhouse gas avoidance target.

The energy efficiency of our products is a facet of "design for the environment." In telecommunications systems, energy supply and management can affect as much as one-third of the operating cost and much of the environmental impact over the life of a product.

- Lucent's Microelectronics Group participates as an Energy Star Ally in a voluntary program for reducing energy consumption in personal computers. The effort involves electronic components that operate at a low 3.3 volts (vs. 5 volts in most semiconductor electronic circuitry) and that automatically put circuitry into "sleep mode" during extended

idle periods.



Energy Cost Savings
(millions of U.S. dollars)

AIR EMISSIONS

Lucent Technologies' production facilities have played a pioneering role in reducing and eliminating chlorofluorocarbons (CFCs) in electronic systems manufacture. Those stable compounds had a long and high-volume history of use not only as refrigerants and propellants but also as cleaning agents for electronic circuit boards. Then their role in depleting the earth's ozone layer was identified.

In 1987, Lucent Technologies (then part of AT&T) targeted CFCs for elimination in manufacturing. It achieved this by developing and introducing replacement materials and techniques while meeting the same manufacturing objectives. By 1995 Lucent operations had virtually eliminated CFC use in its manufacturing processes. The electronics industry in general has striven to follow suit.

Lucent is also committed to ensure that any newly acquired facilities eliminate CFC's from their manufacturing operations. At the same time, Lucent continues to press the elimination of remaining CFC usage in refrigeration systems. These CFCs are being managed until equipment containing them reaches the end of its useful life.

As part of its goal to reduce air toxics, Lucent also has eliminated from its manufacturing processes another chlorinated material, the cleaning agent TCA (1, 1, 1 trichloroethane), which is also implicated in the chemical interactions that destroy atmospheric ozone.

Lucent is also sustaining the gains it has made in reducing reportable toxic air emissions - a decline of 96 percent from 1987 to 1994. We have achieved this even while adding operations and growing the business globally.

WATER MANAGEMENT

The Lucent Technologies EH&S program requires reviews of all water discharge permits and discharge monitoring reports. The company adheres to all specified local standards throughout the world and to minimum standards of its own, which in some instances exceed local requirements.

The chart shows a substantial reduction in water permit exceedances in the period 1993-96.



Number of Water Permit Exceedances

Lucent is committed to recycling at least 70 percent of its wastepaper by the year 2000.

Lucent Technologies' preference is to eliminate wastes rather than dispose of them.

Lucent's goal is to recycle at least 70 percent of its wastepaper by the year 2000. The status of this commitment is reflected in the chart below. The company is also meeting its goal of maintaining total manufacturing waste disposal at the 1994 level, indexed to production volumes.

Lucent Technologies is committed to incorporating practices, including design for the environment, that reduce or eliminate waste generation in the first place. When waste cannot be totally eliminated, the hierarchy of desirable practices is: waste reduction (most desirable), reuse, recycling, energy recovery, treatment and (least desirable) disposal.

The level of non-hazardous waste disposal at off-company premises is about one-third the level generated in 1987, while our manufacturing output has increased significantly.

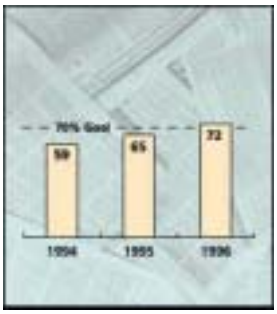
WASTE

In 1996, Lucent generated about 20 million pounds of hazardous waste that was shipped off site for reclamation, treatment or other disposition at approved and permitted facilities.

Hazardous waste includes flammable and corrosive liquids, wastewater-treatment plant sludges, metallic drosses, residuals and others. The company's preference is to eliminate wastes, rather than dispose of them, to reduce the potential risk and liability while protecting the environment.

Hazardous waste from Lucent locations in the United States goes to 60 approved sites. The company is working to reduce the number of approved sites for waste disposal and electronic scrap in the United States with the aim of enhancing overall supplier management and oversight.

At the same time, as our global activities continue to expand, we are increasing the number of approved sites outside the United States to meet needs of the business.



Recycling Goal:
70% Cardboard and Paper Recycled

The Lucent Technologies Environmental Heroes Award recognizes those who lead by example.

Lucent Technologies Foundation

- Partnered with the National Science Foundation and contributed $500,000 in support of Industrial Ecology Faculty Fellowships in higher education.
- Supported employee groups worldwide who engaged in 22 environmental projects during the Lucent Global Day of Caring, Oct. 5th, 1997.

On these pages we feature the 14 winning projects in Lucent Technologies' first Environmental Heroes Award Program. Winning team members received Lucent Environmental Heroes Award certificates and a $1,000 contribution to a nonprofit environmental organization of their choice.

The Environmental Heroes Award recognizes employees who have successfully addressed environmental issues in their business practices, in their workplaces and in their communities.

Renew America, a non-profit environmental organization based in Washington, D.C., chose judges who selected Lucent's 1996 environmental heroes.

Environmental Program Effectiveness
Environmental Management Practices
Environmental Social Responsibility
Environmental Planning for the Future
Environmental Health and Safety Awards

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Environment, Health and Safety Awards

Environmental Program Effectiveness Heroes



Hazardous Waste Management Program, Atlanta Works, Network Systems

Considered by many to be one of the best waste management programs in the United States, this program is managed by **Dr. Ila Elson**, an environmental and ergonomics engineer. "We've trained everyone with a need to know on how to identify and handle hazardous waste," said Dr. Elson. "Everyone understands it's a key responsibility, which my colleagues, Ben Lias and Stan Kaufman and I truly appreciate." Lias is hazardous waste production specialist, and Kaufman is the environment and safety technical manager.



Lucent Technologies Pioneers and Guilford Center Recycling Program, Greensboro, N.C

Some 40 Telephone Pioneers recycled 528 tons of paper over the past two years, and used the money they raised for community service projects. Team leader **Charlie Finch**, a senior engineer in Advanced Technology Systems (Business Communications Systems unit), said,

"We're working for continuous improvement in our program: more paper recycled, more trees, water and energy saved, and less waste going to the landfill. It's a very simple concept that can be replicated wherever there is a buyer for the paper and dedicated volunteers like ours."



The Quality New Jersey Environment Focus Group

Formed in 1989 as a joint business/government effort to support improved quality of New Jersey's shore water after the Natural Resource Defense Council rated it the worst in the United States, this group developed and implemented a plan that helped result in New Jersey's shore water being cited as the most improved in the nation in 1995. "This program resulted in beach cleanup cost savings and increased tourism revenue," said corporate quality manager **Judy Soltis**, who served on the team, together with Jim Sellar of Lucent's Global EH&S group. "This is what's possible when business and government collaborate."

Lucent Technologies
Bell Labs Innovations

Environmental, Health and Safety Awards

Environmental Management Practices Heroes



Volatile Organic Compound Emission Reduction, Columbus Works (Ohio), Network Systems

Columbus Works was the first plant in Lucent to develop and implement significant reductions in volatile organic compound (VOC) emissions with technology developed in part by Bell Labs and a team led by **Barbara Thompson**, Distinguished Member of Technical Staff. "By employing innovative process modifications, our team eliminated the VOC emissions from 75 percent of the Columbus Works' wave soldering machines," said Thompson, "and did it without sacrificing product quality or production time, and at a lower cost."



Environmental Management System ISO 14001, Rouen, France

More and more, Lucent Technologies' customers ask that we have environmental management systems in place. This Network Systems Product Realization Center made it possible for Lucent to become one of the first telecommunications companies in Europe to receive ISO 14001 certification from the French Quality Assurance Association. Team leader **Guy Le Mareschal**, environment and health security manager, and Jacques Daviere led the effort. Said Le Mareschal, "Our method of environmental management is one of continuous improvement, and one that supports Lucent's values."



Implementation of an Environmental Management System, Tres Cantos, Spain

In June 1996, Network Systems Espana became the first communications company in Spain to meet the Spanish Environmental Management Systems Standard UNE-77-801 and the first organization in Lucent Technologies to receive ISO14001 certification. This effort began in 1994, when the factory launched a program led by environment and safety manager **Rosa Balaguer** to develop, implement and certify an Environmental Management System. Balaguer reports that Network Systems Espana is sharing experiences with other Lucent plants.

Lucent Technologies
Bell Labs Innovations

Environmental, Health and Safety Awards

Environmental Social Responsibility Heroes



Thailand Microelectronics Group Plant

Charoenwong (Meng) Chansirisarthaporn. Supported by plant management, Meng, the environment, health and safety officer for the Bangkok plant, co-organized an EH&S Technology Transfer Conference in Bangkok last year, bringing together people from business, industry and education. As president of the Electronic and Computer Association in Thailand for the past two years, he's worked with the government to plan an environmental week each July for all the factories in the country. Meng is a member of the team that helped the Bangkok plant receive ISO 14001 certification. "Our EH&S success is attributable to strong teamwork and encouragement from our leadership," he said.



Kane Area Rehabilitation and Education for Wildlife (KARE), Kane County, Ill.

Gail Walton, a Network Systems Human Resources manager in Lisle, is one of eight volunteers who founded KARE in 1994. Since then, the group has cared for more than 3,000 birds and mammals, given more than 25 educational presentations to schools, veterinarians, scouts, and other interested groups, and built numerous facilities to house and care for injured, orphaned and displaced native wildlife.



Lucent Technologies Beautify Allentown Project, Allentown, Pa.

Since October, 1994, six volunteers from the Microelectronics Group plant in Allentown have been selecting local areas in need of sprucing up. Once a month, they arm themselves with brooms, tools, and garbage bags and use a company van to clean up and fix up schools, parks, rivers and residential streets. Group team leader **Rick Walbert**, master machinist in Lucent's Microelectronics Group, reports that the team also received a Community Spirit Award from an Allentown newspaper.

Lucent Technologies
Bell Labs Innovations

Environmental, Health and Safety Awards

Environmental Planning for the Future Heroes



Lucent Focused Industrial Ecology, Murray Hill, N.J.

Industrial Ecology is the study of sustainable interactions between industry and environment. It gave rise to "design for the environment," a concept developed by, among others, **Robert Laudise**, adjunct chemical director at Bell Labs. Since 1989, Laudise has been instrumental in encouraging companies to use environmentally sound materials and processes in manufacturing. "Industrial materials, processes and products should be synergistic with the natural ecology," he said.



Design for the Environment (DFE) at the Merrimack Valley Works (Mass.), Network Systems

Assisted by Bell Labs environmental research, the Network Interface Unit (NIU) Product Realization Center design group implemented the principles of Design for the Environment. Products are designed to be easily recyclable. "Using Design for the Environment principles and easy assembly approaches has helped us to design an environmentally sound product and reduce assembly costs by minimizing the number of parts required to build it," said Physical Design team leader **Mike Zimmerman**, Distinguished Member of Technical Staff.

Warren Corporate Center, Warren, N.J.



Lucent Real Estate designed and constructed a five-building complex on 186 acres in rural New Jersey while maintaining the natural beauty of the site. The effort created a cluster of low-rise buildings specifically designed around the site's extensive wetlands, intermittent water courses and a designated flood plain. "We were able to balance the company's need for a new facility while significantly maintaining the rural landscape and wildlife habitats," said project manager **Scott Lehmann**.

Lucent Technologies
Bell Labs Innovations

Environment, Health, Safety and Community Leadership

Environment, Health & Safety Community Leadership

Lucent Technologies is committed to protecting the environment and the health and safety of our people, our customers, and the communities where we operate. Meeting this commitment is a primary management objective and the individual and collective responsibility of all Lucent employees worldwide.

EH&S leaders in Lucent Technologies, listed below, strive to ensure that Lucent Technologies fulfills its EH&S commitments by supporting managers in achieving their EH&S objectives and employees worldwide in meeting their individual and collective EH&S responsibilities.

Environmental, Health and Safety Lead Team integrates the Lucent EH&S community to achieve focus, efficiency and performance in EH&S. It recommends EH&S policies and goals for decision by the Lucent Executive Committee; approves EH&S standards for worldwide implementation; and provides leadership in the deployment of EH&S management systems. The team leader, John D. Pittman, reports to Lucent's president and chief operating officer.

John D. Pittman,
Vice President, Chief Quality, Environment, Health & Safety Officer
Richard H. Bennett, Jr.,

Global EH&S Center Vice President
John C. Borum,
Global EH&S Center Vice President (1996)
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Consumer Products
Ted D. Polakowski,
Microelectronics Group
Alan M. Schlesinger,
Law
Lawrence G. Shoner, M.D.,
Health and Safety
Douglas E. Harvey,

Chief Information Officer Group

Environmental, Health and Safety Officers are EH&S advocates in operating units, corporate centers, and regions to ensure that EH&S policy, goals and program initiatives are integrated in operating plans through EH&S management systems.

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Michael Glowatz,
Industrial Hygiene, Safety and Toxicology
Donald N. Heirman

Network Systems:
Nelson W. Marshall,

Product Realization
Glenn C. Wightman,

Advanced Technologies:
Kenneth E. Foss

Asia/Pacific:

Donald N. Heirman,
Global Product Compliance
Paul E. Wyszkowski,
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Consumer Products:
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Jeffrey H. Hooper,
International Services
Renee Hoy,
AT&T Customer Business Unit;
(Joan M. Mondi, 1996)

Dennis T.G. Tan

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Caribbean/Latin America:
Carlos T. Ortiz

Europe/Middle East/Africa:
Enrique Redondo

Lucent Real Estate:
Bonnie A. McManus
John Signorello

CIO:
Rex L. Hughes

Global Environmental, Health and Safety Center Management Team provides EH&S program guidelines, best current practices and tools to the Lucent community and monitors EH&S performance worldwide.

Richard H. Bennett, Jr.
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John C. Borum,
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