Mission Statement

To support the mission of Rutgers, The State University of New Jersey, by providing comprehensive and professional health, safety, and environmental services to the University community.
I. Introduction

The end of 2001 marks the fifth year of our campaign to promote a "Safety Culture" throughout Rutgers University. This culture is a commitment to make safety in the workplace one of our core values and that, collectively, we will work to:

- Protect People
- Protect the Environment
- Promote Compliance

We have made significant progress towards this goal. Our safety performance indicators show significant improvement when compared to our baseline averages (for the years 1992 – 1996). Indeed, for 2001, OSHA Recordable Incidents have been reduced almost 25%, Lost Work Time Incidents are down 70%, and Lost Work Days have decreased almost 80%. For the third consecutive year Rutgers University has qualified for the New Jersey Department of Labor - Governors Safety Award.

We also strive to protect the environment. The most dramatic example of this is the landmark agreement with the Federal Environmental Protection Agency - Region 2 to self-audit and self disclose violations of regulatory compliance. We believe that this process provides us the opportunity to find and correct environmental problems, to demonstrate our leadership amongst academic institutions, and to show our commitment to environmental protection. Note that this is the first such agreement in the country between the EPA and a college or university. We also partnered with the New Jersey Department of Environmental Protection, through their “Greenstart Program” to evaluate our hazardous waste and pesticide programs.

A true safety culture is committed to continuous improvement and much remains to be done. Our goals for 2002 and beyond reflect our desire to achieve our ultimate goal of zero incidents for our students, employees, and visitors and to continue our leadership for safety and environmental protection.

We hope that this report provides a glimpse of our current record, our accomplishments, and our plans for the future. We welcome your comments. Contact us at any time. You can also visit our website at http://rehs.rutgers.edu to learn more about REHS and safety and environmental protection at Rutgers.

A safety culture requires the full participation of all members of the University Community. Together, we can make Rutgers University known not just for academic excellence, but also as a leader in safety and environmental protection. We welcome and appreciate your efforts to support our activities.

Michael C. Quinlan
Director, Rutgers Environmental Health and Safety
II. Selected Accomplishments 2001

EPA AUDIT AGREEMENT  Negotiated and signed an agreement with the Federal Environmental Protection Agency (Region 2) to self audit and self report violations of federal environmental requirements for eleven different regulatory programs. This was the first comprehensive audit agreement between the EPA and an academic institution in the country. This agreement allows Rutgers to complete the audits under a negotiated timetable, correct noncompliance issues, and potentially avoid monetary penalties associated with the disclosures.

Rutgers First in Nation to Do Voluntary EPA Audit
Rutgers, the State University of New Jersey, has taken advantage of EPA’s innovative self-audit policy and agreed to do a comprehensive environmental audit of its five major campuses and off-campus facilities. The agreement is the first of its kind between EPA and a college or university (EPA Website, www.epa.gov)

UNIVERSITY SAFETY PERFORMANCE  Our ongoing efforts to promote a “safety culture” showed continued improvement in our safety experience. For the third consecutive year we qualified for the New Jersey Department of Labor “Governor’s Safety Award” for our success in reducing lost time incidents. Our incident rate and lost time case rate also improved over last year.
II. Selected Accomplishments 2001 (Cont.)

EMERGENCY RESPONSES  Managed over 100 emergency incidents (those requiring an immediate response from REHS staff). These included:

- Over 50 responses to address "anthrax" scares.
- 11 Spills or releases of hazardous materials.
- 17 Severe injuries or other safety emergencies.
- 14 Complaints of odors or other critical indoor air quality issues.
- 10 Radioactive materials incidents.
- 9 Other emergencies.

RADIATION SAFETY  An unannounced, comprehensive inspection of our radiation safety program by the Federal Nuclear Regulatory Commission in December revealed no violations.

OCCUPATIONAL HEALTH AND SAFETY  Implemented the following programs to address new or revised regulatory requirements:

Hearing Conservation Program - Conducted over 300 noise surveys, provided training and conducted baseline audiograms for 230 employees.


Powered Industrial Trucks - Developed a written program and a training program for employees using fork trucks and other lift vehicles.

Injury/Illness Record-keeping - Revised the First Report/Accident Investigation forms to record workplace injuries and illnesses to comply with new OSHA/PEOSHA requirements for recordkeeping.
III. Protecting People

**OCCUPATIONAL HEALTH AND SAFETY** We seek to keep all our employees safe and healthy while working at Rutgers University. Due to the incredibly diverse nature of the activities at the University, we have developed a broad array of programs to manage exposures to potential physical and chemical hazards, provide for safe working surfaces and machinery, prevent ergonomic injuries, and address regulatory requirements. This includes the following specific programs:

- Accident Investigation
- Bloodborne Pathogens
- Chemical Hygiene (Laboratory Safety)
- Confined Space Entry
- Ergonomics
- Hearing Conservation
- Hot Work
- Indoor Air Quality
- Laser Safety
- Lead Paint
- Lockout / Tagout of Hazardous Energy Sources
- Respiratory Protection
- Safety Management Audits

**ASBESTOS MANAGEMENT** As part of our comprehensive asbestos management program we perform surveys of buildings to identify suspect asbestos containing materials prior to any renovation or maintenance activities; visually inspect buildings with asbestos containing ceiling materials; manage all asbestos abatement activities; and provide awareness training to all maintenance and housing employees. In 2001 we collected over 1500 samples for asbestos analysis; visually inspected 31 buildings with over 2800 rooms; and completed 347 asbestos abatement projects.

**RADIATION SAFETY** Over 150 Principal Investigators at Rutgers use sources of ionizing radiation (including x-ray producing equipment) in their research or teaching endeavors. REHS, in support of this work, is responsible for providing a comprehensive radiation safety program and maintaining our licenses with the Federal Nuclear Regulatory Commission and the NJ Department of Environmental Protection (Bureau of Radiation Protection). Some of our activities include training programs, surveys and inspections, emergency response, and waste management. Annually, we deliver over 2400 radioactive materials packages; complete inspections of over 2300 laboratory rooms, and calibrate over 300 survey instruments. We also have a contract to provide comprehensive radiation safety services to the UMDNJ-RWJMS research facilities on the New Brunswick/Piscataway campuses.
III. Protecting People (Cont.)

We routinely provide Right to Know and other training programs to advise employees of the hazards of their operations and measures for protection; conduct workplace surveys to identify and assess hazards, and recommend corrective actions. We maintain a comprehensive web-site which provides easy access to Material Safety Data Sheets and all of our written safety and health and emergency programs. In addition to our routine activities, in 2001 we conducted 43 ergonomic evaluations; responded to 55 complaints of poor Indoor Air Quality; and conducted inspections of all maintenance shops for the Facilities, Housing, Dining, Utilities, and Athletics Departments.

**BIOLOGICAL SAFETY** Commonly referred to as “Biosafety”, this discipline is dedicated to the safe use of biohazardous agents (bacteria, viruses, toxins, etc), recombinant DNA, and human blood. REHS maintains a listing of the biohazards in use throughout the University, performs inspections of laboratories using these materials, and provides training programs and consultative services. We also maintain the biological safety cabinet certifications, a testing procedure to ensure the containment systems used in the laboratories are working properly.

**EMERGENCY RESPONSE** - We routinely respond to reports of spills, odors, serious accidents, indoor air quality emergencies, and other critical incidents. Typically, there are about 50 “emergency responses” per year. REHS has staff trained and equipped with the necessary personal protective equipment to handle many of the minor spills and releases. We maintain contracts with response contractors to supplement our capabilities. We worked collaboratively with the RU Emergency Services and RU Public Safety to address the numerous “anthrax” scares (over 50) during the fall of 2001.

For 2002, we look to provide an “Emergency Response Team” in collaboration with Emergency Services staff. This team will utilize the new Response Trailer and will be capable of providing a “first response” to any hazardous materials incident and entering locations using self contained breathing apparatus and other protective clothing (except for Level A responses). Further, the Team will be capable of providing clean-up for most of the incidents we experience at the university. We believe this team will provide for reduced response times, improved rescue capabilities, and a faster implementation of appropriate remedies.
IV. Protecting The Environment

University teaching, research, and maintenance operations generate many different types of wastes that must be disposed without adverse impact to our environment. REHS manages the collection and disposal of the following regulated waste streams throughout all University campuses and facilities: Hazardous Waste, Radioactive Waste and Medical Waste.

These wastes are highly regulated at both the Federal level (US Environmental Protection Agency, US Nuclear Regulatory Commission, and US Department of Transportation) and the State level (New Jersey Department of Environmental Protection). Our goal is to manage these materials in a manner which is protective of the environment, cost effective, minimizes the burden on the University community, and demonstrates compliance with the regulations. The Environmental Services Building (ESB) on the Busch campus serves as the primary storage facility for hazardous and radioactive wastes. We routinely collect these wastes from all campuses and transport materials to the ESB for segregation, storage, and packaging for ultimate disposal.

**HAZARDOUS WASTE** Research and teaching laboratories generate most of the hazardous wastes from Rutgers University. Separate storage facilities (90 Day storage areas) are located on the Cook, Newark, and Camden campuses. Wastes are shipped to the ESB which is a fully permitted storage facility (wastes may be stored for up to one year). A licensed waste hauler will transport wastes to permitted disposal facilities for fuel recovery, incineration, treatment or, in limited instances, to a hazardous waste landfill.
IV. Protecting The Environment (Cont.)

RADIOACTIVE WASTE Solid and liquid radioactive wastes are generated by research and teaching activities. Note that as part of our contract with UMDNJ-RWIMS, we also manage the radioactive waste from their facilities on the New Brunswick and Piscataway campuses. Again, these wastes are collected from the laboratories and transported to the Environmental Services building. Wastes containing short-lived radioactive isotopes are decayed to background. These can then be disposed without regard to the radioactivity, a very environmentally sound and cost-effective strategy. Liquid wastes can be disposed to the sanitary sewer in strict accordance with the regulations.

Solid radioactive wastes with long-lived isotopes must be sent for ultimate disposal. Our current disposal strategy uses a facility that vitrifies the waste (a thermal process), thus stabilizing the material. It is then sent to the Barnwell, South Carolina land disposal facility in accordance with our regulatory requirements.
IVA. Protecting The Environment (Cont.)

MEDICAL WASTE Regulated medical waste (RMW) is generated by University research and health center operations. RMW consists of several classes including, but not limited to, cultures and stocks of infectious agents, human blood and blood products, human pathological waste, needles, syringes and sharps, and contaminated animal wastes. Each of these classes of RMW must be treated (usually autoclaving) to kill pathogens or disease causing agents prior to disposal at an authorized solid waste management facility.

RMW is disposed of through the use of an outside vendor. Regular pick-ups are scheduled at each generator site. In 2001, the University disposed of approximately 7,110 cubic feet of RMW, as compared to 2,958 cubic feet the previous year. This increase is largely attributed to increased activities of the RU Cell and DNA Repository.

GROUNDWATER INVESTIGATIONS In an effort to protect local groundwater while maintaining regulatory compliance, Rutgers has over the past several years identified and removed over 280 obsolete or unused underground storage tanks (USTs) from University property. We now have less than 25 USTs in service. Of these remaining USTs, all Federally regulated tanks have been upgraded and are now part of a periodic monitoring program. Those few remaining USTs not included in the Federal program will be removed pending conversion to natural gas or upgraded in the next two years.

In the process of removing these USTs, some tanks were found to have leaked. As part of our continued commitment to the environment, Rutgers has engaged in a groundwater investigation of each leak to assess environmental impact. In most cases the impact was found to be minor, requiring only limited remediation. In some cases more extensive investigations were required. Currently, we are involved in thirteen groundwater investigations, six of which are likely to become long-term remediation projects.

AIR EMISSIONS The University generates air emissions primarily through the combustion of natural gas and oil for heating and cooling the campus buildings. Due to the size of the University and the amount of fuel burned, Rutgers must comply with the same regulations that govern large power plants and industrial facilities. This includes elaborate and complicated permits with extensive and continuous testing, monitoring, record keeping and reporting requirements. One example of this is the annual emissions statement, whereby the fuel usage and emissions from over 1,000 pieces of fuel burning equipment at the University, must be calculated and compiled to determine the University's overall emissions, for several different pollutants.
V. Goals 2002

While we have shown continuous improvement in our services, much remains to be done. Designing and implementing a comprehensive health, safety and environmental management system to promote pollution prevention and environmental excellence; completing our EPA audits and addressing issues of noncompliance; and implementing new OSHA/PEOSHA record keeping changes are a few of the challenges we must meet for this coming year. A more complete list of our priority goals for 2002 is shown below:

EPA SELF AUDITS / SELF DISCLOSURES Complete the audits and submit the disclosure reports in accordance with our agreement. Audit reports are due as follows:

**March 1, 2002**
- Underground Storage Tanks
- Asbestos - NESHAPS
- Clean Air Act - NSPS sources
- Toxic Substances Control Act - PCB's
- Lead Based Paint - Disclosure Rule

**June 15, 2002 - October 31, 2002**
- Clean Air Act - Ozone Depleting Substances (CFCs)
- FIFRA - Pesticides
- RCRA - Hazardous Waste Management
- Risk Management Plans
- Spill Prevention, Countermeasure, and Control Plans (SPCC)
- Underground Injection Control - Class V Wells

HEALTH, SAFETY, AND ENVIRONMENTAL MANAGEMENT SYSTEM Develop a proposal for establishing a comprehensive management system for all EHS activities.

SAFETY CULTURE ACTIVITIES Continue to develop a safety culture amongst the major administrative units. This includes our safety management audits; management meetings; safety awareness day; and working with the Department safety committees to promote employee involvement in our safety program.
V. Goals 2002 (Cont.)

EMERGENCY RESPONSE TEAM In conjunction with Public Safety, implement our joint team to respond to emergency situations throughout the University.

RADIATION SAFETY Complete the annual audit of the program and address all audit recommendations.

GROUNDWATER INVESTIGATIONS Complete the remedial investigation phase for the Busch Garage groundwater case and continue all investigations for the underground storage tank sites.

PARTICULARLY HAZARDOUS SUBSTANCES Implement our program to minimize the risks associated with the use of particularly hazardous substances in University laboratories.
### VI. Regulatory Inspections For 2001

<table>
<thead>
<tr>
<th>MONTH</th>
<th>AGENCY</th>
<th>ACTIVITY</th>
<th>RESULTS</th>
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</thead>
<tbody>
<tr>
<td>JANUARY</td>
<td>PEOSHA</td>
<td>Employee complaint of sickness from paint odors in Engelhard Hall</td>
<td>NO VIOLATIONS.</td>
</tr>
<tr>
<td>PEOSHA</td>
<td>Follow-up site inspection of CD/FMS and Utilities areas from citations issued in 2000.</td>
<td>All items abated.</td>
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<tr>
<td>PEOSHA</td>
<td>Employee complaint of egress concerns in Newark Central Heating Plant.</td>
<td>Citations issued for general safety hazards. All items abated.</td>
<td></td>
</tr>
<tr>
<td>NIDHSS</td>
<td>Regulated Medical Waste compliance on Cook Campus</td>
<td>NO VIOLATIONS.</td>
<td></td>
</tr>
<tr>
<td>FEBRUARY</td>
<td>PEOSHA</td>
<td>Site inspection at Bridgeton facility</td>
<td>Several citations issued. All items abated.</td>
</tr>
<tr>
<td>PEOSHA</td>
<td>Notification of hospitalization of Security employee.</td>
<td>Automobile accident on Route 18.</td>
<td></td>
</tr>
<tr>
<td>PEOSHA</td>
<td>Employee complaint of sickness from HVAC work in Hill Hall.</td>
<td>NO VIOLATIONS.</td>
<td></td>
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<tr>
<td>PEOSHA</td>
<td>Notification of hospitalization of Utilities employee.</td>
<td>Employee was burned on the chest from hot water while working in Walters Hall.</td>
<td></td>
</tr>
<tr>
<td>PEOSHA</td>
<td>Follow-up site inspection of B/L FMS, CAC FMS and Utilities from citations issued in 2000.</td>
<td>All items abated.</td>
<td></td>
</tr>
<tr>
<td>MARCH</td>
<td>PEOSHA</td>
<td>Site inspection of Walters Hall from notification in February.</td>
<td>Citations for general safety hazards. All items abated.</td>
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<tr>
<td>NB Health Dept.</td>
<td>Student complaint of no water, flooded basement.</td>
<td>NO VIOLATIONS.</td>
<td></td>
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<tr>
<td>PEOSHA</td>
<td>Written response to IAQ complaint in Camden Post Office</td>
<td></td>
<td></td>
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<tr>
<td>APRIL</td>
<td>PEOSHA</td>
<td>Follow-up site inspection at Bridgeton facility from citation issued in February</td>
<td>All citations abated.</td>
</tr>
<tr>
<td>USNRC</td>
<td>Investigation at RWJMS following report of potential loss of 32P</td>
<td>NRC accepted REHS report. NO VIOLATIONS.</td>
<td></td>
</tr>
<tr>
<td>MAY</td>
<td>PEOSHA</td>
<td>Follow-up site inspection in Walters Hall from citations issued in March.</td>
<td>All violations abated.</td>
</tr>
<tr>
<td>CCMUA</td>
<td>NJPDES Permit for Camden Science Building</td>
<td>NO VIOLATIONS.</td>
<td></td>
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<tr>
<td>NIDCA</td>
<td>Compliance inspections of asbestos abatement at Hillel Bldg, Hardenbergh Hall, Cook Publications Bldg.</td>
<td>NO VIOLATIONS.</td>
<td></td>
</tr>
<tr>
<td>NIDEP</td>
<td>Compliance with transportation requirements for hazardous materials.</td>
<td>NO VIOLATIONS.</td>
<td></td>
</tr>
<tr>
<td>NIDEP</td>
<td>Busch/Livingston standard air compliance inspection</td>
<td>NO VIOLATIONS.</td>
<td></td>
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<tr>
<td>JUNE</td>
<td>PEOSHA</td>
<td>Phone call per citations issued in 2000 at FMS shops</td>
<td>All items abated.</td>
</tr>
<tr>
<td>JULY</td>
<td>PEOSHA</td>
<td>Site inspection of IAQ complaint at Camden Post Office</td>
<td>NO VIOLATIONS.</td>
</tr>
<tr>
<td>NIDEP</td>
<td>Hazardous waste and pesticide inspection of Bridgeton facility per employee complaint</td>
<td>NO VIOLATIONS; recommendation for corrective action.</td>
<td></td>
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<tr>
<td>OCTOBER</td>
<td>NIDCA</td>
<td>Compliance inspections of asbestos abatement at Hillel Bldg</td>
<td>NO VIOLATIONS.</td>
</tr>
<tr>
<td>Div of Wage &amp; Labor</td>
<td>Wage inspection for asbestos abatement.</td>
<td>NO VIOLATIONS.</td>
<td></td>
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<tr>
<td>DECEMBER</td>
<td>PEOSHA</td>
<td>Notification of hospitalization of a Fine Arts employee in Camden.</td>
<td>Employee’s finger became infected from puncture wound.</td>
</tr>
<tr>
<td>NIDCA</td>
<td>Compliance inspection of asbestos abatement at Pharmacy</td>
<td>NO VIOLATIONS.</td>
<td></td>
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<tr>
<td>USNRC</td>
<td>Comprehensive inspection of all radioactive materials usage</td>
<td>NO VIOLATIONS.</td>
<td></td>
</tr>
<tr>
<td>NIDHSS</td>
<td>Regulated Medical Waste Inspection on CAC campus</td>
<td>NO VIOLATIONS.</td>
<td></td>
</tr>
<tr>
<td>OTHER</td>
<td>PEOSHA</td>
<td>Two citations from inspections conducted in 2000 at the Haskin Shellfish Station &amp; Bridgeton facility under contest.</td>
<td>Issues not resolved.</td>
</tr>
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</table>
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