

BNL, W.R. Grace Win R&D 100, Editors' Choice For Patented Asbestos-Digesting Product

BNL and W.R. Grace & Co. have jointly won not only an R&D 100 award, but also one of only three R&D 100 Editors' Choice awards for developing an asbestos-digesting foam. The patented formulation chemically digests the asbestos fibers in fireproofing and other materials, while maintaining the material's functional properties (see Brookhaven Bulletin, December 12, 1997, and http://www.gcp-grace.com/products/fireprotect/dma_info.html).

R&D 100 Awards are given annually by *R&D Magazine* to the top 100 technological achievements of the year. Typically, these are innovations that transform basic science into useful products. The awards were presented at Chicago's Museum of Science and Industry on September 23.

The Editors' Choice award was presented as a complete surprise at the ceremony to only three of the 100 winners. BNL and Grace won for "Environmental Responsibility" in recognition of the breakthrough approach that the foam provides to asbestos abatement.

BNL and Grace developed the patented foam over four years of research and testing. Grace is now marketing the product, under the name DMA, for Digestive Material for Asbestos, for use in asbestos-containing products, such as fireproofing on building columns, beams and decking. LVI Environmental Services Group, Inc., of New York, and North Shore Environmental Industries, of Michigan, have been licensed by Grace as applicators of the DMA process.

"We are pleased that our cooperative research with Grace resulted in a product that has proven to be highly effective," commented Ronald Webster, the Department of Applied Science (DAS) researcher who now heads the asbestos program at Brookhaven. "I congratulate Leon Petrakis, a former BNL employee, who initiated and led the asbestos research effort with W.R. Grace." Webster and Petrakis represented the Brookhaven team at the R&D 100 Awards ceremony in Chicago.

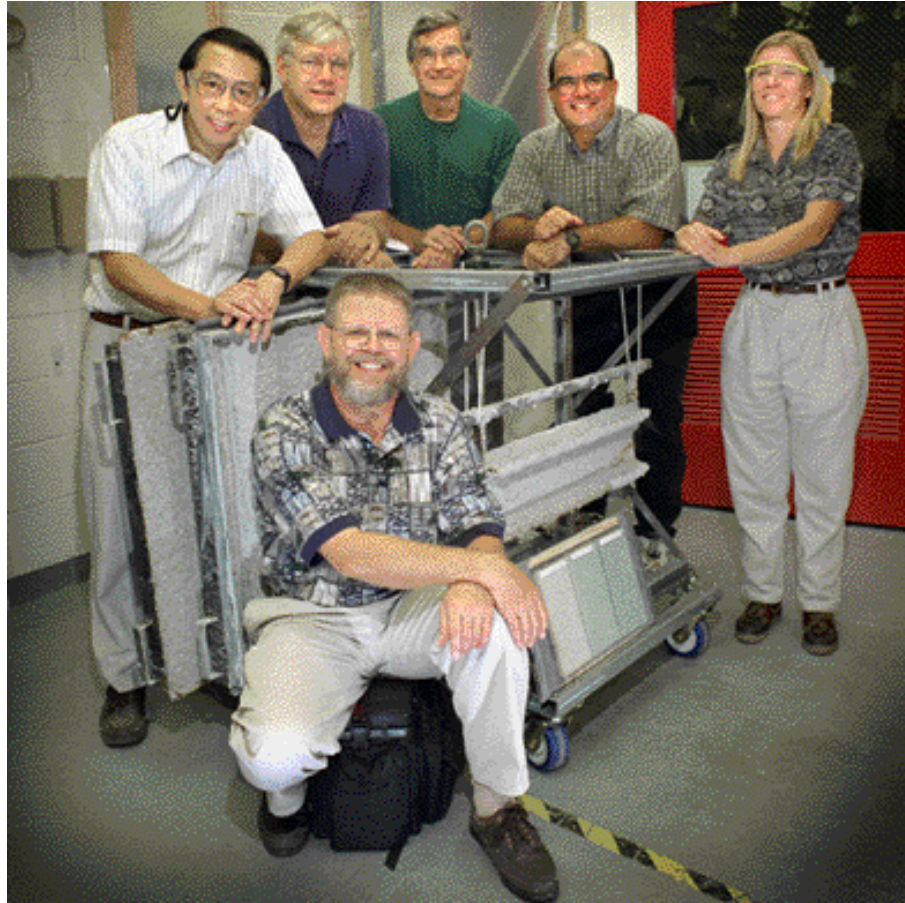
Process Chemistry

The foam is an acid solution that is sprayed directly onto the asbestos-containing material. It chemically digests asbestos fibers, dissolving them into harmless minerals and leaving behind a material that still retains its functions, but is no longer considered a regulated material. The active ingredients in DMA are phosphoric acid and a small amount of a proprietary fluoride catalyst.

The process is the first to destroy asbestos chemically without the material's having to be removed. Conventional techniques for removing asbestos require the construction of airtight barriers, labor-intensive scraping, and the installation of new material.

The new product eliminates the need to remove and replace older material and substantially reduces the time needed for the entire process. Moreover, the new process produces essentially no waste and saves building owners the expense of disposing of regulated asbestos waste materials.

The foam was first evaluated in a BNL testing laboratory that was specially adapted to handle asbestos. It was then tested at a four-story build-



Led by Ron Webster (front) and gathered around test samples coated with non-asbestos-containing fireproofing are the BNL members of the BNL-W.R. Grace asbestos-abatement research team: (from left) Toshi Sugama, Dave Elling, Walt Reams, Bob Sabatini, and Marita Berndt, all of the Department of Science.

ing with existing asbestos-containing fireproofing. The DMA-treated fireproofing also was tested at Underwriters Laboratories using nationally recognized testing procedures. Those tests demonstrated that treated fireproofing maintained the same fire rating on columns, beams and decking as

the originally installed material.

Using x-rays at the Lab's National Synchrotron Light Source, as well as conventional laboratory instruments, BNL and Grace also developed a new analytical method that detects asbestos fibers in material containing as little as 0.1 percent of the fibers. The

RHIC Dedication 10/4: Tentative Schedule

As announced in last week's Bulletin, Energy Secretary Bill Richardson will be on site next Monday, October 4, to dedicate the Relativistic Heavy Ion Collider (RHIC).

At present, the tentative schedule for the event is as follows: at 8:30 a.m., buses for RHIC tours will begin picking up employees at one stop only — at the intersection of Brookhaven Avenue and Center Street (not at the Brookhaven Center as previously announced); the Longwood High School marching band and cheerleaders are to perform around 9:30 a.m. at the Collider Center, Bldg. 1005; and the dedication ceremony will begin at 10 a.m.

After the national anthem, an introduction by Laboratory Director John Marburger and remarks by the President's Science Advisor and others, Energy Secretary Richardson will dedicate RHIC. The ceremony is scheduled to conclude by 11:30 a.m.

A symposium on RHIC physics will begin at 2:30 p.m. in Berkner Hall, which will be convened by Dennis Kovar, who is Director of DOE's Division of Nuclear Physics in the Office of Science.

When the schedule is finalized, it will be announced through a broadcast e-mail. All employees are invited to the event, but they must obtain their supervisors' approval before attending.

new method was developed in order to determine asbestos levels accurately below one percent, which is the regulation (continued on page 3)

BNL Publishes 1998 Site Environmental Report

On September 1, the Lab published its 1998 Annual Site Environmental Report (SER), which describes BNL's environmental performance, and highlights major environmental programs and efforts.

It also summarizes data from the Lab's comprehensive environmental monitoring program, which monitors potential pathways of exposure, measures potential environmental impacts from Brookhaven operations, and provides data to evaluate compliance with applicable regulatory and permit limits.

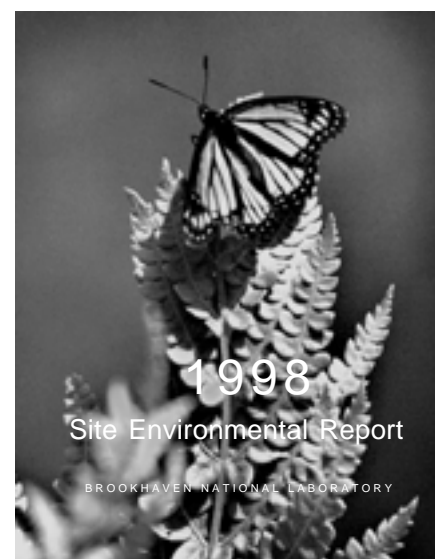
The Lab has published an SER each year from 1962 to 1966 and 1971 to 1998. A summary report for 1967-1970 is also available.

The annual report helps identify long-term trends associated with the Lab's activities. As was reported, trends indicate a steady reduction of BNL's releases to the environment.

For instance, as is reported in the document, the amount of waste that Brookhaven generated in 1998 was half of what it produced in 1993. Air emissions were reduced by more than 85 tons since 1997.

In addition, it is reported, over 200 million gallons of water were conserved compared to 1997. And there were about half the number of reportable spills in 1998 when compared to the previous year.

As noted in the report, external auditors who reviewed Brookhaven's environmental monitoring found im-



provements to its program and no significant problems.

The 1998 report was available on the Web seven months earlier than the previous year's; its early publication also beat DOE's October 1 deadline. "Producing the SER is a tremendous effort that involves many BNL employees," explains ESD Manager Bet Flores. "We are pleased at the improvements in timeliness and quality."

In response to feedback on last year's report, the 1998 SER includes more graphics and more lucid text, and is a better organized publication.

Environmental program highlights reported in the 1998 SER include the following:

- In 1998, the maximum credible radiation dose to the public due to Lab

air emissions was 0.2 millirem (mrem), or less than 0.1 percent of the average natural background level of radiation. This dose is calculated for a hypothetical individual residing at the BNL boundary 24 hours a day for the entire year, and is 1/50th of the U.S. Environmental Protection Agency's (EPA) standard of 10 mrem for the air pathway. DOE's dose limit for the public from all man-made exposure pathways is 100 mrem per year.

• Brookhaven strengthened its already aggressive pollution-prevention program, a key Lab program aimed at environmental protection. Potential sources of pollution to air, water and land are extensively evaluated and reduced or eliminated so as not to cause environmental problems.

Over the years, BNL has reduced waste generated by routine operations. For instance, from 1993-1998, the amount of hazardous waste generated declined by 72 percent, mixed waste by 79 percent, and radioactive waste by 51 percent.

By 1998, three of Brookhaven's four boilers had been converted to use natural gas instead of oil; as a result, emissions of sulfur dioxide, nitrogen oxide and total suspended particulates declined by 88 percent (66.2 tons), 10 percent (8.5 tons) and 80 percent (11 tons), respectively, from totals recorded in 1997.

Other projects initiated in 1998 (continued on page 2)

Photo by Roger Stoutenburgh

Photo by Roger Stoutenburgh, graphics by Pat Yalden

Local Good Causes Get BNL's Excess Paint



Roger Stoutenburg

Some of the paint that BNL donated to good causes is driven off site.

What do you do when you have 2,000 gallons of good paint that you can no longer use?

In BNL's case, this paint came in types no longer used at the Lab, such as oil-based paint that has been replaced in 95 percent of cases by latex paint. Since the paint was taking up

space in Paint Shop storage, a less expensive solution than disposing of it for \$12,000 was needed.

A better solution was found. The paint was given away to deserving causes, thanks mainly to the efforts of Pete Stelmaschuk of the Plant Engineering Division; Mike Guacci, Carole

McNulty, and Donna King of the Property Management Group in the Administrative Support Division; Peter Pohlot, Environmental Services Division; and Robert Gordon, DOE Brookhaven Group.

The paint was donated to the Fireman's Museum and the Town of Brookhaven. Through Brookhaven Town, the paint will be shared among the Parks & Recreation Department, the Scouts, Habitat for Humanity, and Operation Firestorm, which is a renovation project in North Bellport.

As a result, "There is more room for the currently specified paints in BNL's Paint Shop," said Pohlot, "and it's very satisfying that the paint we gave will get such good use."

"We hope to do the same with other usable excess materials disposed of through the Waste Management Division or metal salvage," Polhot continued, "but the process requires preparation. Because of the requirements to prevent fraud and abuse, and to fulfill other regulations, lots of paperwork is needed to give away anything from the site. However, it's worth it."

— Liz Seubert

Register for 10/14&15 Pine Barrens Forum

Register by next Friday, October 8, for the 1999 Pine Barrens Research Forum, to be held on October 14 & 15, again sponsored by the Central Pine Barrens Commission and the Long Island Groundwater Research Institute (LIGWRI), as well as BNL. Again featuring a day of technical discussions in Berkner Hall and a day in the field, the forum is free and open to all interested.

On Thursday, October 14, conference attendees will be welcomed by Laboratory Director John Marburger and will hear a keynote address on "Pine Barrens Drinking Water Resources in the Next Millennium," to be presented by Michael LoGrande, Chairman of the Suffolk County Water Authority.

Following a poster session, a technical session will be convened by Suffolk County Executive Robert Gaffney. During rest of the day, presentations will be made on research into: landscape-change monitoring, pitch-pine seedlings survival after fire, groundwater and surface water relationships, and other ecology topics.

On Friday, October 15, field-day attendees, who will be limited to the first 25 registered, will be led by Robert Parris of the U.S. Fish & Wildlife Service through the Wertheim National Wildlife Refuge in Shirley. During the walk through oak and pitch pine stands, grassland areas and other habitats, the natural-resource monitoring and management programs carried out at the refuge will be discussed.

To register, call the LIGWRI, 632-9780 or -8674; fax 632-8820, or e-mail hbokuniewicz@notes.cc.sunysb.edu.

Benefit Notes

Medical, Dental Enrollment Open Until October 29

During open enrollment, described below, employees who want to change their medical and/or dental coverages must contact the Benefits Office, Human Resources Division, Bldg. 185, Ext. 2877, or (800) 353-5321 by Friday, October 29.

Medical, Dental Open Enrollment

Until October 29, eligible employees working 20 or more hours per week may make changes to their medical and dental coverages: employees may join a medical and/or dental program, change from one program to another, add or drop coverage for family members, or drop coverage entirely.

Also until October 29, retirees and participants on long-term disability or COBRA may make changes to their medical and/or dental coverage.

Coverage changes made during the open-enrollment period will become effective January 1, 2000. Changes can only be made during the annual open-enrollment period or when what is called a qualifying event occurs. Qualifying events include: the birth or adoption of a child; marriage, divorce or legal separation; loss of dependent status; or a spouse's gain or loss of employment. Qualifying events allow employees to make certain changes to their coverage within 30 days of the event.

Employees who do not want to change their coverage at this time do not have to do anything for it to continue.

Medical Choices: PPO vs. HMOs

The medical insurance plans available to eligible employees are: CIGNA preferred provider organization (PPO), and three health-maintenance orga-

nizations (HMOs): Vytra Healthcare, Aetna U.S. Healthcare, and HIP Prime. Employees who enroll in any of these plans must pay a contribution toward the cost of coverage.

In a PPO program, health care is provided through a network of physicians and health-care facilities, but provisions are made so that participants can obtain such care from providers who are not in that network.

For care provided within the network, there are no claim forms to submit. For care received outside the network, claim forms must be submitted to receive partial reimbursement.

In an HMO, employees receive medical services from physicians and at health-care facilities within the HMO's provider network. There are no claim forms to submit, and many services are covered, including physician visits, well-baby care, surgery, x-rays, hospitalization, diagnostic tests, and prescription drugs. Some HMOs require a copayment at the time services are rendered.

Dental Choices: CIGNA vs. Eastern

Two dental insurance plans are available to eligible employees: the CIGNA Dental Health Plan, and the Dental Assistance Plan administered by Eastern Benefit Systems. Employees who enroll in either of these plans must pay a contribution toward the cost of coverage.

Under the CIGNA Dental Health Plan, there are no deductibles, no maximum benefits, and no claim forms to submit. Dental services are provided through a network of participating dentists. Many preventive and

basic services are covered in full. Reimbursement for restorative and orthodontic services is based on a fee schedule.

Under the Dental Assistance Plan administered by Eastern Benefit Systems, employees may choose any dentist, and reimbursement for preventive, diagnostic, basic, and major dental services is based on a fee schedule. Orthodontia for dependent children is covered at 50 percent of a reasonable and customary charge. Claim forms must be submitted.

The Dental Assistance Plan has a \$25 individual and \$75 family deductible per calendar year for basic and major dental services.

The maximum benefit is \$1,000 per person per calendar year for non-orthodontic services. There is a separate \$1,000 lifetime maximum per child for orthodontia.

Plan Representatives on Site

To help employees decide among the medical and dental plans, representatives of all the above plans will be in Berkner Hall over four days: from 11 a.m. to 1:30 p.m. on Tuesday, October 5, and Wednesday, October 13; and, during the Healthfest '99 health, fitness and safety fair, from 11 a.m. to 2 p.m. on Wednesday, October 20, and Thursday, October 21.

During these dates and times, literature on the plans will also be available, including comparison sheets, and lists of participating physicians, dentists and health-care facilities.

In addition, representatives of BNL's Benefits Office will be available to answer questions.

1999 SER

(cont'd)

included the installation of ozone water-treatment systems to replace chemical processes, the replacement of mercury-filled instrumentation, and the installation of a new evaporation system for nonhazardous industrial wastewater. Installation of new air-cooling systems reduced the Lab's water usage by 200 million gallons in 1998.

- BNL's wildlife management program, designed to protect and monitor flora, fauna and their habitats, was improved in 1998. Monitoring showed that farm-grown vegetation

remains unaffected by Lab activities.

Deer and fish on and near the site continue to show slightly elevated levels of Brookhaven-related radionuclides. Calculated maximum credible doses due to fish and deer consumption were 0.26 mrem and 7 mrem, respectively. The dose due to deer consumption is based on a generous annual-consumption estimate of 63 pounds per person.

- Brookhaven has developed and began implementing an enhanced environmental management system to ensure that it operates in an environmentally responsible manner that

protects the ecosystem and human health.

Compliance, pollution prevention, waste minimization, and conservation of resources are being integrated into the planning, decision-making, and implementation phases of all site activities.

- Areas of the Lab's site where past activities have caused groundwater, soil and sediment contamination continued to undergo monitoring and cleanup in 1998 under the environmental restoration program. Environmental restoration at Brookhaven is conducted in cooperation with the SCDHS, NYSDEC, the EPA, and DOE.

In 1998, BNL's four groundwater remediation systems extracted chemical contamination from more than 700 million gallons of water.

- In 1998, Brookhaven's sewage treatment plant, which is a discharge point regulated by NYSDEC, complied with state regulations for liquid discharges in more than 99 percent of samples taken.

Compliance exceptions occurred four times for iron, once for biological oxygen-demand removal, and one for pH levels. While iron discharges exceeded the permitted level, the concentrations were comparable with typical levels of iron seen in the Peconic River upstream of the discharge point.

Tritium concentrations in the sewage treatment plant discharge were at their lowest levels since routine monitoring began in 1966, averaging less than 3 percent of the New York State and EPA drinking water standard.

"We expect to report more improvements next year, as the enhanced Environmental Management System is fully implemented," concludes Flores. *The 1998 Site Environmental Report (SER) can be found on the World Wide Web at www.esh.bnl.gov/esd/1998ser.htm. A summary booklet will also be available at www.bnl.gov/bnlweb/ser98summary.pdf. Paper copies of the full report will be available by October 15. To obtain copies of the entire SER or the summary booklet, call Ext. 2345. The report is also available at libraries near Brookhaven. Suggestions on how the report can be improved in the future are welcome via the feedback form at the Web site.*

Stack Refurbishing Almost Complete



Roger Stoumenburgh

About 500 gallons of red and white concrete sealer are brightening the Lab's skyline as the workers of the Frenold Construction Corporation of West Babylon are barely a day away from completing their task of refurbishing and recoating BNL's 320-foot concrete stack. Manufactured for use on concrete stacks, the coating is thickly applied and expected to last for many years. Supervised by the Plant Engineering Division's Engineering & Construction Division and coordinated by Chris Harris

of the Reactor Division, the project is part of the never-ending task of keeping up the Lab's facilities. "It's a big task, but this contractor has gone the extra mile," said Harris. "They work within all safety boundaries and do an excellent job." Added PE Manager Ed Murphy, "The stack project has corrected certain problems and spruced up the most visible structure at BNL. Keeping Lab facilities, such as the stack, in good order is a challenge in view of our limited resources."

— Liz Seubert

ESL Classes Start 10/7

The fall session of the on-site English as a second language (ESL) classes begins Thursday, October 7.

ESL classes are offered free to employees, facility-users, other BNL guests, and their spouses on Thursday evenings from 6:30 to 9:30 p.m. in the Human Resources training room in the back of Bldg. 459. Those new to the class are advised to arrive promptly at 6:30 p.m. to receive more information and have their English language skills assessed.

For more information, call Starr Smith, Ext. 7631, or Marilyn Pandorf, Ext. 5251.

Equipment Demo

AMCO's mobile showroom will be parked at Berkner Hall on Tuesday, October 5, from 10 a.m. to 3 p.m., during which time its electronic packaging products will be on display. The mobile showroom will feature AMCO's LAN/data cabinets, monitoring consoles, shielded cabinets, and bench desks with cabinets, which can be modified to meet design specifications.

For more information, call Don Laskay of Grimm Siegel Associated, cell phone (973) 575-9300.

Computing Corner

The Information Technology Division (ITD) will offer the following software classes in October:

date	class	level
10/13	PowerPoint	beginner
10/15	Excel	beginner
10/20-21	Access	beginner
10/22	Outlook	
10/23	Word	beginner
10/29	Excel	advanced

See the ITD training page at www.ccdbnl.gov/bnl/training for registration information and course outlines. Classes are scheduled based on the number of requests received. For more information, contact Pam Mansfield, Ext. 7286 or pam@bnl.gov.

R&D 100 Award (cont'd)

latory limit above which a material is considered to be an asbestos-containing material.

The partnership between BNL and Grace involved a Cooperative Research & Development Agreement, which funded the multimillion dollar project. It also received funding from DOE's Office of Environmental Management and Office of Science's Laboratory Technology Research Program. Initial funding also came from BNL's Laboratory Directed Research & Development program and DAS.

With Grace, BNL is continuing research on other potential uses of the DMA foam, including other types of asbestos-containing insulation.

The Lab is also independently working to develop other types of chemical solutions for use with insulation and building materials containing other types of asbestos, such as amosite asbestos. DAS Chemist Toshi Sugama and Petrakis, have been awarded one patent in this area, and others are pending.

Volleyball News

BERA Volleyball League team captains will meet on Wednesday, October 6, at noon, in Room B, Berkner Hall.

Also on October 6, two clinics will be held: a referee's clinic is scheduled at 5 p.m. in the gymnasium, and at least one member from each team must attend. At 6 p.m., a volleyball skills clinic will be held, which is open to all players and will cover all aspects of the game. If you plan to attend, contact Travis Shrey at shrey@bnl.gov.

Regular season play will begin on Monday, October 18, for Open Leagues A and B and League II, and on Wednesday, October 20, for Leagues I and III.

Walk for a Good Cause

Walk for Healthier Hearts

Participate in the 1999 American Heart Walk on Sunday, October 3, at either Suffolk County Community College in Riverhead, or the State University of New York at Farmingdale.

For more information, Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.

'Walk for Beauty'

The sixth annual Walk for Beauty will take place on Sunday, October 3, starting at 9:30 a.m. at the Stony Brook Post Office.

Proceeds from this event will benefit breast-cancer research funded through the Carol M. Baldwin Research Fund, Inc. Each registered BNL walker will receive a free T-shirt from Friends of Brookhaven, Inc.

For registration information, directions and assembly information, contact Stephanie LaMontagne, Ext. 7141 or stephl@bnl.gov; or Donna Grabowski, Ext. 2720 or grabowsk@bnl.gov.

Healthfest '99 – A Week of Health, Fitness, Safety

From October 18 through October 22, BNL employees, retirees, facility-users, and other on-site guests are again invited to participate in Healthfest — the Lab's seventh annual celebration of personal health, fitness and safety.

The five-day festival has the following schedule of activities:

Monday, October 18

- **Aerobic stretch** - rain or shine, 11:45 a.m. - 12:05 p.m., at the Science Education Center, Bldg. 438.
- **Fitness walk** - 2 miles, rain or shine, 12:10 - 1 p.m., starting at the Science Education Center, Bldg. 438.

Tuesday, October 19

- **Aerobic stretch** - rain or shine, 11:45 a.m. - 12:05 p.m., at Central Shops, Bldg. 462.
- **Fitness run** - 5 kilometers (3.1 miles), rain or shine, 12:10 - 1 p.m., starting at the Biology Department, Bldg. 463.

Wednesday, October 20

- **Health, fitness & safety fair** - 11 a.m. - 2 p.m., featuring displays, screenings and demonstrations at Berkner Hall, Bldg. 488.
- **"Youth and Violence" seminar** - noon - 1 p.m., in Berkner Hall auditorium, Bldg. 488.

Thursday, October 21

- **Health, fitness & safety fair** - 11 a.m. - 2 p.m., featuring displays, screenings and demonstrations at Berkner Hall, Bldg. 488.

Friday, October 22

- **Tennis skills workshop** - 11:30 a.m. - 1:30 p.m., at the BNL tennis courts on Bell Avenue.
- **Golf skills clinic** - 11:30 a.m. - 12:30 p.m. and 12:30 - 1:30 p.m., at gazebo by the ball fields.

For more information and to sign up for the stretches, walk, run, health screenings, and/or sports clinics, see the lilac-colored Healthfest flyer mailed to all employees or the Healthfest brochures found around site, or look for next week's Bulletin.

Hospitality Committee

The Hospitality Committee invites all on-site residents, their spouses and friends to join it during the following events. More details are posted in the laundry and on the door of the Recreation Building. For more information, call Julie Kim-Zajonz, 929-0405.

Welcome Coffee

Coffee is served to apartment area residents every Tuesday, from 10 a.m. to 11:30 a.m., in the lounge of the Recreation Building in the apartment area.

Parent-Toddler Group

Parents of two- and three-year-olds are invited to bring the children to the Recreation Building every Wednesday, 9:30-11:30 a.m. For more information, call Sarah Zill, 821-2602.

Volunteers Wanted

The Committee needs volunteers to help organize hospitality events, including the welcome coffee, family nights, bus trips, and other special events. If you are interested, then call Julie Kim-Zajonz, 929-0405.

Dosimetry badges will be exchanged today, Friday, October 1. Therefore, please place your badge in its assigned rack space before leaving work today.

BROOKHAVEN BULLETIN

Published weekly by the Media & Communications Office for the employees of BROOKHAVEN NATIONAL LABORATORY

MARSHA BELFORD, Editor
LIZ SEUBERT, Assistant Editor

Bldg. 134, P.O. Box 5000
Upton NY 11973-5000
Tel. (516) 344-2345; Fax (516) 344-3368

Free Jazz Concert

The Peter Bellino Quintet will present a program of jazz standard and original compositions in Berkner Hall, on Thursday October 7, at 8:30 p.m. Admission to this concert is free, and refreshments will be available.

Bellino, a popular trumpet and flugelhorn performer in local clubs, organized his quintet around other past and present members of the doctoral program in music at the State University of New York at Stony Brook, including featured vocalist Sunita Bellino.

Atlantic City 11/6

The last of this year's BERA-sponsored bus trips to Atlantic City on will be on Saturday, November 6. The cost will be \$25, and the hotel-casino and coin return will be announced later.

The bus will leave the Brookhaven Center promptly at 8 a.m. and return by approximately 10 p.m. Movies, games and free rolls or donuts will be available on the bus; bring your own coffee and juice.

Paid reservations are taken at the BERA Sales Office, Berkner Hall, Tuesday-Friday, 9 a.m.-1:30 p.m. For more information, call Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.

Arrivals & Departures

Arrivals

J. Scott Berg Physics
Karen D. McNulty Media & Comm.

Departures

Thomas Camaro Physics
Vangal N. Muthukumar Physics
Muriel I. Pfeiffer Human Res.



OPEN RECRUITMENT - Opportunities for Lab employees and outside candidates.

MK8735. PHYSICIST - Requires a Ph.D. or equivalent in experimental particle physics. Will work in BNL's Omega Group on the D0 experiment at Fermilab's Tevatron, as part of the D0 collaboration currently upgrading the detector in preparation for Run II with the Main Injector scheduled to begin spring 2000. Will be expected to contribute to the Lab's leading role in software and hardware efforts associated with this upgrade, including off-line software, on-line software and controls, and/or fabrication and commissioning of the Forward Pre-shower Detector. Will be encouraged to pursue a physics topic with other BNL scientists or others in the collaboration. Under the direction of H. Gordon, Physics Department.

MK8191. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in physics or materials science, with a strong background in transmission electron microscopy. Experience in electron diffraction, imaging, spectroscopy, energy-filtering, holography, and computer modeling is desirable. Will participate in research involving the study of electronic structure and structural defects in advanced materials, and the use of the 300 kV state-of-the-art transmission electron microscope. Under the direction of Y. Zhu, Department of Applied Science.

NS8092. RF ENGINEER POSITION - Requires a BS in electrical engineering or a related field. Responsibilities include the design and development of hardware and software for particle accelerators' rf digital signal-processing systems. Collider Accelerator Department.

NS8734. COMPUTER ANALYST POSITION - Requires an advanced degree in physics, or related field, with substantial experience in developing software algorithms using object-oriented programming languages for high-energy or nuclear physics experiments. Experience with UNIX systems, modern programming techniques, tools and languages, large-scale data processing, and use of relational and object-oriented databases is highly desirable. Will be responsible for contributing to the design, development and implementation of the software infrastructure, and to assist physicists in the software development effort. U.S. ATLAS Project, Physics Department.

BERA SALES CLERK - (part time) To staff the BERA Store in Berkner Hall. Sales experience and some computer knowledge are required. Must be available Mondays and to work on weekends. For more details, call M. Kay Dellimore, Recreation Office, Human Resources Division, Ext. 2873.

Motor Vehicles & Supplies

88 FORD BRONCO II - a/t, all power, no rust or dents, runs well, looks fine, \$2,100. Edward, Ext. 7502.

86 CHEVY CAVALIER - 4-dr., a/t, 102k mi., runs well, \$1,100. Bill, Ext. 3859.

86 FIREBIRD - a/t, new brakes, high mi., \$800 obo. Jenna, 878-7791.

86 TOYOTA CAMRY - 5-spd., 4-cyl., 153k mi., good cond. Ext. 7505.

85 CHEVY S10 BLAZER TAHOE - 5-spd., 4x4, V-6, 2-dr., body straight, 165k mi., some rust, fun, \$1,500. Brian, 474-7892.

85 OLDS CIERA - white, many new parts, excel. running cond., \$500. Peter, Ext. 4982 or 689-5668 eves.

79 CADILLAC COUPE DE VILLE - a/c, runs very well, \$500. Jim, Ext. 3372 or 821-0250.

Fun for Children of All Ages

Festival of Science, the Environment

Given the popular response to last September's Environmental Fair (see Brookhaven Bulletin, December 18, 1999), the Lab has decided to expand the fair into a festival, and to enlarge the scope to include science and the environment. So, on Saturday, October 16, all are invited on site, rain or shine, to attend the first "Festival of Science and the Environment" from 10 a.m. to 3 p.m. Once again, the event is free, and no reservations are required.

On the same day, the on-site Upton Forecast Office of the National Weather Service will hold its annual open house, which is popular with weather-watchers.

During the festival, Lab scientists will be available under the big tent to discuss exhibits on some of the Lab's scientific and environmental research and technology-development work. Also on hand will be members of the Lab's Environmental Restoration Division, to discuss what the Lab is doing to remedy the environmental problems that stemmed from Brookhaven's past operations.

Around the site, tours of some major facilities, nature walks, and many family-fun activities will be offered, including a recycling race, kite flying, face painting, and birdfeeder building.

Last Day to Buy Your Softball Party Tickets

Today is the last day to buy tickets to the BERA Softball Party, which starts at 5:30 p.m. on Friday, October 15, at the Brookhaven Center.

Tickets are \$10 per person for a buffet dinner and DJ music; a cash bar will be available. To purchase tickets, bring cash to Andrea Epple, Bldg. 51M, Ext. 5943.

ANS Meeting 10/6

Robert Bari, the Chair of BNL's Department of Advanced Technology, will speak on "Nuclear Inevitability—Power of the Future?" at the next dinner meeting of the Long Island Section (LIS) of the American Nuclear Society (ANS), starting at 6 p.m. on Wednesday, October 6, at the Blue Spruce Inn in Farmingville. Make reservations by Tuesday, October 5, by calling Ken White, Ext. 4423.



Participate in On-Site Turkey Watch

Roger Stoutenburg

From now on, if you see a group of wild turkeys parading around the Lab site, then jot down the location, time, date, and number of birds. Also, attempt to note the exact number of adult and young, and/or male and female birds, and add that to your list. Then, send the information to Jan Naidu or Tim Green of the Environmental Services Division (see below).

The information will be reported to Harry Knoch, Regional Wildlife Manager for the New York State Department of Environmental Conservation. Knoch, who is running a program to reintroduce native species of wild life into what used to be its natural habi-

tat, needs feedback on the results of this program on Long Island (see Brookhaven Bulletin, November 20, 1998).

Because most turkeys stay within an established territory, the same group of birds may appear at the same time, same place, on most days. Data on more, or bigger, groups than were spotted last year will help demonstrate the success of the wild-turkey program on the Lab site.

Send reports on observed turkeys to Green or Naidu, Bldg. 535; or e-mail tgreen@bnl.gov or jnaidu@bnl.gov; or telephone Green, Ext. 3091, or Naidu, Ext. 4263.

Wanted: BNL Crafts for Fall Show

Attention BNL crafters: your finest weaving, crocheting, quilting, metalworking, knitting, sewing, macramé, or woodworking is needed for the BERA Art Society's upcoming Fall Crafts Festival, to be held at Berkner Hall from Monday to Wednesday, November 22-24, from 11:30 a.m. to 1 p.m. An evening reception will also be held from 5 to 7:30 p.m. on Monday, November 22.

BNL employees, their family members 15 years and older, retirees, facility users, and guests of BNL may all contribute. More than one piece may be entered by an exhibitor, to be shown as space permits. All crafts are welcome.

Bring exhibits for the show to Room B, Berkner Hall, the afternoon of Friday, November 19. For the catalog, complete two forms for each work entered and return them by Friday, November 5, to Robert Chrien, Bldg. 510A. More forms are at the BERA Store, Berkner Hall. Copies are acceptable.

Entry for Fall Craft Festival Show, November 22-24, 1999

Name home phone.....

BNL contact BNL extension

Type of craft

Approximate space needed

Circle as appropriate: vertical or horizontal, table or floor

Please print clearly and return to Robert Chrien, Bldg. 510A, by November 6.