



Roger Stouthenburgh CNS-140-01

365th Brookhaven Lecture, June 20

Obesity Offers Food for Thought

Scientists do not yet understand why some people become obese or pathological over-eaters.

However, the 365th Brookhaven Lecture, "Brain Changes in Obesity," to be given by Gene-Jack Wang, Medical Department, on Wednesday, June 20, at 4 p.m. in Berkner Hall, may offer some clues. Wang will describe his team's studies using positron emission tomography (PET) to understand the underlying neurological mechanisms for pathological overeating and obesity.

One recent finding Wang will discuss is that, compared with normal-weight subjects, obese subjects have fewer receptors in their brains for dopamine, a brain chemical associated with feelings of pleasure and reward.

This finding is similar to findings about people addicted to cocaine, nicotine, or other drugs, "implying that obese people may eat more to try to stimulate these deficient dopamine pleasure circuits, just as addicts do by taking drugs," says Wang.

(continued on page 3)

'Science Funding in Washington' — Battelle's Jack Bagley Speaks, June 20

At noon in Berkner Hall on Wednesday, June 20, Jack Bagley, Battelle's Washington, D.C., representative, will give his views on getting science funded. Sharing his knowledge of the D.C. scene, Bagley will discuss the best ways to promote science, BNL, and individual research projects. The Lab scientific community is urged to attend the event, which is sponsored by Brookhaven Organization of Scientists and Friends of Brookhaven.

Environmental Report Issued Covering Years 1947-61

This week, BNL published a radiological emissions and environmental monitoring report for the years 1947-61. The report completes the series of environmental reports that the Lab has publicly issued from 1962 to the present. The document summarizes air and water emissions on and around the site for BNL's first years of operation.

Major facilities in operation during the period of this report were: the Brookhaven Graphite Research Reactor (1950-69); the Hot Laboratory (1951-present); the Cosmotron (1953-56); the Brookhaven Medical Research Reactor (1959-2000); and the Alternating Gradient Synchrotron (1960-present).

To produce the report, the Lab reviewed extensive but incomplete records that are now 40-plus years old. The data bear out some general observations:

- The BGRR was the primary source of routine air emissions, and argon-41 (1.8-hour half-life) was the dominant radionuclide. All air emissions were below radiation guidelines of the time, although they did increase when the BGRR fuel was changed in 1958 from natural uranium to enriched uranium.

- The BGRR, the Hot Laboratory, and decontamination and hot-laundry operations generated most of the radionuclide-contaminated liquid effluents discharged to the sanitary system. Cesium-137 (30-year half-life) was the dominant radionuclide. All liquid effluents were below guidelines of the time.

- On 28 occasions, brief non-routine emissions of radioactivity resulted from malfunctioning BGRR fuel elements during the early years of BGRR operations. The radionuclide of most potential concern was iodine-131 (8-day half-life).

Data presented in this report are meant primarily to complete the sequence of BNL's reporting of environmental monitoring data from BNL's establishment in 1947 to the present. The report summarizes emissions, release estimates, and environmental monitoring from the early years.

Several information gaps were filled based on assumptions and analyses of available data. In all cases, the intent was to make assumptions that were reasonable but would result in an overestimate of releases.

(continued on page 3)

BNL Licenses New Technology To Treat Mercury Waste

BNL has licensed its mercury-waste treatment technology to Newmont Technologies Limited, an affiliate of Newmont Mining Corporation, the largest gold producer in North America.

The new technology chemically stabilizes and solidifies liquid elemental mercury, a by-product of gold mining.

"Our method makes mercury easier and safer to handle and to dispose of, and it isolates the toxic metal from the environment," said Paul Kalb of the Environmental Sciences Department (ESD), who invented the new process with Mark Fuhrmann, ESD; Daniel Melamed, a former BNL employee; and Baves Patel, a former DOE intern at the Lab.

In the past, gold-mining companies and other industries sold by-product elemental mercury for industrial use. The industrial use of mercury has declined, however, falling in the U.S. from 2,000 tons per year in the 1980s to less than 50 tons per year today. BNL's new technology should make disposal of the excess mercury practical and safe.

The process, called sulfur polymer stabilization/solidification (SPSS), is based on a treatment technology for mixed waste that was developed at the Lab and patented in 1997 by Kalb; John Heiser, ESD; and BNL retiree Peter Colombo. Mixed waste consists of metals and/or chemicals, as well as radioactive materials. This work and the development of the new method for mercury stabilization was funded by the DOE Environmental Management Office of Science & Technology.

"Our method makes mercury easier and safer to handle and to dispose of, and it isolates the toxic metal from the environment."

In SPSS, toxic liquid mercury is mixed with sulfur-polymer cement and small amounts of additives in a heated vessel until all the mercury is converted into mercuric sulfide, a compound that has low solubility and low vapor pressure.

The thermoplastic mixture is then melted to form a homogeneous mixture and poured into a mold in which it cools and solidifies. This solid waste form immobilizes the mercury so that it exceeds stringent U.S. Environmental Protection Agency standards for leaching.

"Incorporating the mercury into a solid form is an important part of our method," said Kalb. "Conventional amalgamation also



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To develop and demonstrate BNL's mercury-waste-treatment technology and bring it to the marketplace, (from left) Mark Fuhrmann and Jay Adams, both of the Environmental Research & Technology Division (ERTD) in the Environmental Sciences Department (ESD); Creighton Wirick, ESD Chair; Biays Bowerman, ESD; and Michael Greene, BNL's Office of Intellectual Property & Industrial Partnerships, worked with Paul Kalb, ERTD Head.

chemically stabilizes mercury, but it transforms the element into a dispersible powder, which is more accessible for human exposure and can be easily mobilized by wind and groundwater."

The license gives Denver-based Newmont exclusive rights for mining applications under a pending patent application filed by BNL. Newmont will work with Lab researchers to scale up the technology for industrial use and, afterward, will offer sublicenses to other mining operations around the world.

Marc LeVier, Newmont's director of metallurgical services, said, "We're excited about this technology and its possible application at mining operations worldwide to address the industry's need for new options to prepare mercury for disposal."

The license granted to Newmont is restricted to gold-mining use of the technology, leaving open the possibility for Brookhaven Science Associates to offer licenses for other uses of SPSS. These potential licenses will include the results of on-going production scale-up engineering studies.

— Diane Greenberg

Tooth Fairy Tale Claims vs. Reality

On June 6, the Radiation and Public Health Project (RPHP) released the results of its baby-tooth study done in Suffolk County. This controversial study, conducted by the antinuclear group in several East Coast areas near operating nuclear power plants, looks at levels of radioactive strontium-90 in baby teeth and links that data with childhood cancer rates.

RPHP's study claims that BNL and nuclear power plants in the tri-state region are "probably" the source of this strontium-90. BNL health physicist Steve Musolino, who has followed the group's activities for many years, said their claim "makes no sense."

"Food and drinking water everywhere contain small amounts of strontium-90 remaining in the environment from above-ground nuclear testing that ended in the 1970s," Musolino said. "If you were to grab a handful of soil in your own backyard and subject it to laboratory analysis, you'd find a tiny amount of strontium-90."

Musolino explained that, as a result of these well-documented environmental levels in soil and surface water, food products, especially dairy products such as milk and cheese, contain detectable levels of strontium-90.

Since strontium-90 acts like calcium when it enters the body, it is incorporated into growing teeth and bones.

"As a result, every person born after 1945 is going to have some strontium-90 in their teeth," said Musolino, adding that trying to tie these tiny environmental levels to strictly regulated emissions from local power plants or BNL is a stretch.

"Since Long Island no longer has commercial dairy farms, our dairy products come from places like upstate N.Y., Vermont, and Wisconsin. That is where this strontium-90 is coming from."

As the June 7 edition of *Newsday* reported, out of the four areas RPHP studied, Long Island teeth actually have the lowest levels of strontium-90, and the highest level seen in this study is a fraction of what was measured at the height of the Cold War in the 1960s.

Musolino also disputes the linking of strontium-90 levels and childhood cancer. "In the summertime, more people eat ice cream, and more people drown while swimming, so I could argue that ice cream causes drowning," he said. "That's just what this group is trying to do. RPHP is using this study, and these children, to scare the public and advance their very clear agenda — to shut down all nuclear plants."

— Pete Genzer

Calendar
of Laboratory Events

- The BERA Sales Office is located in Berkner Hall and is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347; or M. Kay Dellimore, Ext. 2873.
- Additional information for Hospitality Committee events can be found at the Lollipop House and the laundry in the apartment area.
- The Recreation Building (Rec. Bldg.) is located in the apartment area.
- Contact names are provided for most events for more information.
- Calendar events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.

— EACH WEEK —

Tuesdays: Welcome Coffee
10-11:30 a.m. Rec. Bldg. New-comers meet friends. Mimi Luccio, 821-1435.
— Hospitality event

Wednesdays: On-Site Play Group
9:30 a.m.-11:30 a.m. Rec. Bldg. Parents meet while children play. Free, drop in any time. Monique de la Beji, 399-7656.
— Hospitality event.

Wednesdays: Yoga Practice Sessions
12:10-12:50 p.m., Rec. Bldg., free. Ila Campbell, Ext. 2206.

Wednesdays: Weight Watchers
noon-1 p.m., Brookhaven Center South Room, Mary Wood, Ext. 5923.

Tues. & Thurs.: Aerobic Dance
5:15 p.m., Rec. Bldg. \$4 per class or \$35 for any ten classes. Pat Flood, Ext. 7886; or Susan Monteleone, Ext. 7235.

Mon., Tues., Thurs.: Kickboxing
\$5 per class. Mon. & Thurs. from noon-1 p.m. and on Tues. & Thurs. from 5:15 to 6:15 p.m. Registration is required. Contact, Mary Wood, Ext. 5923, or wood2@bnl.gov.

June is Gay, Lesbian, and Bisexual Pride Month
The Diversity Office, in cooperation with BNL's Gay, Lesbian, or Bisexual Employees Club invites the Lab community to view a poster presentation in Berkner Hall. The display and other information can be found at www.bnl.gov/bera/activities/globe/.

— THISWEEKEND —

Friday, 6/15
AT&T Wireless Demo
11 a.m.-2 p.m., Berkner Hall A representative will present BNLers with special rate plans and equipment pricing. Denise Houlihan, (516) 236-2053.

— NEXT WEEK —

Tuesday, 6/19
Blood Drive
9:30 a.m.-3 p.m., Brookhaven Center. BNL volunteers, ages 17 - 75, in good health, weighing over 110 lbs. can donate blood. Donors should have photo identification and know their social security number. For more information, contact Sue Foster, Ext. 2888, or donateblood@bnl.gov.
Voicestream Wireless Demo
10 a.m.-2:30 p.m., Berkner Hall A representative from Voicestream Wireless will present special rates to BNLers for wireless service on their network. Richard Goll, (516) 343-5900.

Independent Evaluators To Assess
BNL's Environmental Policy Awareness

These crib notes will help you answer questions

BNL's Environmental Management System (EMS) is being independently evaluated during June. Therefore, Lab employees must be prepared to answer questions on how BNL's EMS policy commitments apply to them and what they do during their work day to support those commitments. Below are typical questions and sample answers to help prepare employees. However, if asked, your actual answers should be specific to your own work.

Policy: BNL is committed to complying with applicable environmental requirements.

Q: What environmental hazards are associated with your work?
A: I use chemicals when I conduct bench-top experiments, and the waste chemicals are hazardous.

Q: What environmental requirements (permits, Standards Based Management Systems [SBMS], internal procedures) control these hazards?
A: The SBMS Hazardous Waste Management Subject Area.

Q: What are your responsibilities for making sure these requirements are satisfied?
A: I store the waste properly in a satellite accumulation area, segregate it if needed, label the containers, and transfer it to a 90-Day area when ready for disposal.

Policy: BNL is committed to preventing pollution and minimizing waste generation.

Q: How do you minimize or eliminate pollution associated with your work?
A: By considering pollution prevention (P2) opportunities during experimental safety reviews, or other work planning activities. For example, during the experimental review process, our environmental support staff (ESH Coordinator, Environmental Compliance or Waste Management Representative) recommends alternatives to hazardous chemicals or modifications to an activity to prevent the generation of a waste stream, air emission, or liquid discharge.

Q: If you had an idea on how to prevent pollution, what would you do?
A: If it were a simple idea that I could implement, then I would do so. If it required planning assistance or funding, I would contact our environmental support staff for help in submitting a pollution prevention proposal to my manager and the Pollution Prevention Council for funding consideration. There is also a suggestion form available on the Pollution Prevention Web page.

Policy: We will maintain a positive, proactive, and constructive relationship and openly communicate with our neighbors, regulators, DOE, and other stakeholders.

Q: How does your organization communicate with community members or regulators on environmental issues?
A: The Community Involvement, Government & Public Affairs directorate manages the programs for communicating on environmental issues, such as: public meetings, round-table discussions, working groups, press releases, and direct interaction with stakeholder groups. Employees within each BNL organization help support these efforts by: making presentations to local schools, organizations, or Community Advisory Committee; conducting tours of the BNL facilities during Summer Sundays, open houses and fairs; and talking with their neighbors about concerns they might have. Through these interchanges employees reach out, share accomplishments, and answer the community's questions, building trust with interested parties.

Policy: BNL is committed to an aggressive cleanup of existing environmental problems.

Q: How do you support the cleanup effort of the Laboratory?
A: One way I help is by maintaining ownership of chemicals and radioactive materials from the time of purchase until final disposition, through exchange via the Chemical Management System, proper disposal, or return to my home institution. My organization is also pursuing corrective actions on legacy problems identified during the Facility Review Project.

Q: What is your responsibility if a spill or inadvertent release to the environment occurs?
A: I report the spill by calling Ext. 2222, and then notify my supervisor and ESH staff. The Lab has a team of emergency responders who control and contain the release, and coordinate the cleanup activities. Also, BNL's environmental restoration program identifies, treats or removes, and monitors the historical contamination on site. In certain circumstances, it is appropriate to involve the Categorization Team (see accompanying story, top right).

Policy: We will work continually to improve our environmental management system and performance.

Q: What does this really mean to me and my organization?
A: Continual improvement is a regular part of my daily activities. It is driven by the need not only to eliminate the source of problems, but also to ensure that systems do not stagnate — that they remain vigorous and relevant. We continually review our systems and processes to seek opportunities to do things better. As a part of the BNL team, I learn from our mistakes and successes, and use that feedback and knowledge to improve.

For more information on environmental issues, staff can contact their Management Representative on EMS or their Environmental Compliance Representative. For information on the upcoming ISO 14001 registration audit, contact Susan Briggs, Ext. 3465.



Roger Stoulenburgh CN5-04-01

At a gathering attended by BNL Deputy Director for Operations Tom Sheridan (back, sixth from left) were members of the 2000 and 2001* Categorization Teams, including: (front, from left) Robert McNair, Charles Dimino, John Maraviglia*, Ed Lessard, Pat Williams*, Steve Moss*, Joyce Mortimer, Peggy Sparrow, and Jim Hurst; (back, from left) John Usher, Ray Karol*, Ken Krasner*, Nick Gmur, Sheridan, Ken Sullivan*, Ed Sierra, and Bob Casey*. Not present: Steve Coleman* and Doug Warren.

Notify BNL's Categorization Team ASAP
To Comply With DOE Requirements

At a working laboratory, even when safety procedures are followed to the best knowledge of all concerned, the unexpected can happen. For example, suppose radiolabeled DNA arrived at the Lab in a shipping container that was not approved or labeled for such material. Is such an incident reportable to DOE? Would you know what to do or who to contact if that package ended up in your mail stop?

All abnormal events and conditions such as the one described above are to be reported to a department chair or a division manager immediately upon discovery. Since these unforeseeable events do happen, the Lab has organized a group of Occurrence Categorizers who will evaluate the situation and decide whether the incident should be reported to DOE.

DOE requires that all "reportable" events be made known to them within two hours of the discovery of the situation. Therefore, it is very important for a department chair or division manager to page the on-call Categorizer at (631) 453-5887 as soon as feasibly possible.

According to Edward Sierra, Occurrence Reporting and Processing System (ORPS) Program Coordinator, "The Lab has been handling these types of situations quite well; however, we have been missing DOE's two-hour reporting requirement."

In accordance with DOE Order 232.1A, *Occurrence Reporting and Processing of Operations Information*, all staff are required to notify their department chair or division manager of any abnormal event or condition that they perceive may:

- endanger the health and safety of staff and/or public
- have an adverse effect on the environment
- seriously impact the operations and intended purpose of BNL facilities
- result in loss or damage of property, or adversely affect national security or the security interest of DOE or BNL.

The ORPS office maintains a staff of qualified BNL Categorizers on a rotating schedule 24 hours a day, seven days a week, who will determine if abnormal events or conditions need to be reported to DOE. BNL established the ORPS Program within the Independent Oversight Office in May 2000. According to Sierra, as of April 11, 2001, the Categorizers had evaluated 124 events and determined that 42 were reportable to DOE.

The on-call Occurrence Categorizer can also be contacted through Ext. 2238 or Ext. 2222. For specific information on procedures and more information on the Occurrence Reporting Program, see <https://sbms.bnl.gov/standard/20/2000t011.htm>.

— John Galvin

Exchange New Badges for Old

BNL has converted to the new DOE Office of Science (OS) common badge (white background). Lab employees who do not hold a security clearance will trade their grey or red badges for a new DOE OS common badge. Blue and yellow badges (for Q clearance and L clearance) will continue to be issued.

Subcontractors, guests, and retirees will continue to be issued the site-specific purple badge, with the letter "C" or "G" or "R" in the right margin. Badges for subcontractors in the construction trades will have diagonal white stripes across the colored portion of the badge. These badges are site-specific for BNL and may not be used at any other location.

Reissue will be carried out through a one-for-one exchange at the Safeguards & Security Division (SSD) station at the Brookhaven Center (Bldg. 30), or badges may be delivered to each organizations' administrative staff for issue to their employees. SSD will also assist in badge distribution at these locations. To have badges delivered, administrators are to call Hank Raimondo, Ext. 7258, supplying him with the names and life numbers of members of the organization. Reissue will be by organization, so please respond when notified to exchange your badge.

Once a new badge has been made for an individual, the magnetic stripe encoded data on the old badge is automatically deleted from the system, and that badge will no longer work in card readers. This feature precludes duplicate information in the security-access system. New photographs need not be taken unless facial features have changed.

For more information, visit SSD's Web site, www.bnl.gov/ssd/ or call Raimondo, Ext. 7258.

BNL Lecture (cont'd.)

But it's still not known whether the depletion in dopamine receptors is a cause or a consequence of obesity.

Another intriguing finding is that, while normal and obese subjects' brains are equally active overall, some specific brain regions, such as those associated with sensation in the mouth, lips, and tongue, are more active in obese subjects than in controls.

"This enhanced sensitivity in regions involved in the sensation of food may make food more rewarding and may be one variable that contributes to overeating," Wang says.

Still, the problem of obesity and overeating is complicated.

"We are like three blind men exploring an elephant, each investigating a different part of the whole," Wang says. "One feels and describes the tail, another the ear, and the third the side." It will be some time, he says, before scientists can put these pieces together to get a complete picture of the disease.

Wang came to BNL in 1990 as an assistant scientist in the Medical Department, advancing to associate scientist in 1992, scientist in 1995, associate chief of staff of the clinical research center in 1996, and chief of staff in 1998. From 1999 to 2000, he served as interim Chair of BNL's Medical Department.

Wang received his M.D. degree from Kaohsiung Medical University in Taiwan in 1980, and a Master of Health Sciences degree in radiation health sciences from The Johns Hopkins University in 1984.

Concurrently with his appointment at BNL, from 1992 to 1998, he served as an assistant professor of radiology at Stony Brook University, being promoted to research associate professor in 1999.

Refreshments will be offered before and after the lecture. Those who would like to accompany the lecturer to dinner after the talk at a restaurant off site may call Amalia Ruggiero, Ext. 2837, by 2 p.m. on June 20.

— Karen McNulty Walsh



Many of the 69 Perfect Attendance Awardees of 2000 attended an April 6 celebration at Berkner Hall with Laboratory Director John Marburger (left), Human Resources Division Head Bill Hempfling (back right), and others.

This year, for the first time, BNL held a celebration to recognize the full-time employees who have won \$200-bond Perfect Attendance Awards. Many of the 69 winners were able to attend the afternoon event in Berkner Hall on April 6 and were welcomed by Compensation Manager Robert Kelly of the Human Resources Division's Salary Administration Office.

The winners were then warmly congratulated by Laboratory Director John Marburger. "Brookhaven has a reputation as one of the most productive science labs in the world in terms of the most publications per scientist, and it happens because we care about what we do," said the Director. "As part of a big team, we need every member to be here, ready to do the job on hand to keep things running smoothly. You who have won the Perfect Attendance award deserve our recognition for your willingness to pitch in and help make this Lab the place it is. I'm very grateful for your years of service and dedication."

As Marburger emphasized, many awardees had multiple years of perfect attendance: 11 had won once before, 11 had won twice before, 12 had won three times previously, four were winning for the fifth time, 12 for the sixth time, and one, Phyllis

Tinsley-Smith of the Biology Department, was winning for the ninth time.

The Perfect Attendance award was first given in 1992, when 15 full-time weekly employees on the technical and clerical schedules were recognized for their perfect attendance during 1991. In 1995, these employees and those from the Paper, Allied-Industrial, Chemical & Energy Workers International were joined in being eligible for the award by BNL employees represented by the International Brotherhood of Electrical Workers. In 1998, the members of the Suffolk County Security Police Association in the Safeguards & Security Division also became eligible for the prize.

In addition to the bond and a certificate that had already been sent out before the reception, each winner received a T-shirt stating "Mission Accomplished, Perfect Attendance 2000."

The list below of this year's winners indicates how many times an employee has won this prize by the number following his or her name. No number indicates a first-year win. However, employees who became eligible for the prize after its inception have often served BNL with additional years of perfect attendance that are on record elsewhere.

- Biology Department** - Phyllis Tinsley-Smith, 9
Central Shops - Edward Carley, 2; William Dalton, 4; Frank Flegar, 4; Randolph Seibel, 6
Collider-Accelerator - Glenn Boyle, Nils Danielson, Robert Karl, John Moore, Eugene Rup
Community Involvement, Government & Public Affairs - Sherry Johnson, 2
Environmental Management - Roy Barone, 6; John Foley, 4; Daniel Harrow, 2; Michael Hickey, 2; Gary Schaum, 3;
Information Services - Cornelius Jackson, 6; Alex Reben, 6; Joseph Rubino, 3

- National Synchrotron Light Source** - Brian Kushner; Joan Marshall, 3; John Vaughn, 3
Plant Engineering - Howard Bell; Warren Booker; John Bourquin, 2; Robert Brady, 2; Robert Browngardt, 3; Herman Butts, 6; James Callihan, 4; Thomas Crews, 5; James Durham; Susan Evans, 6; Ganga Ghimiray; Jerry Hobson, 4; Roy Johnson, 3; Richard Keane; Richard Lutz, 6; Lisa Metz, 2; Richard Muller; Carmen Narvaez; Stephen O'Kula, 4; Peter Realmuto; Dennis Renahan, Brian Rohena, 6; William Schmidt, 6; Frank Strelecki, 2; Min-Hsiung Yang, 4;
Procurement & Property Management, Samuel Cortes, 5; Patria Cortes, 5; James Downing, 4; Eva Esposito, 4; Ulises Feliciano, 3; Isidro Garcia; Lamar Gardner, 3; Dhruba Ghimiray, 4; Thomas Johnson, 3; Joseph Modjeska, 6; Jerome Quigley, 6; Marcelino Santiago; Janet Soper, 2; Charles Whiting, 3; Clarence Wilkins, 2; Shelby Williams, 6
Safeguards & Security, Richard Miraglia, 4; George Yancy
Staff Services Division, Selestine Brown, 5; Stanley Hanlon, 3; Linwood Johnson, 4
Waste Management, James Trombacco, 2.

1947-61 Environmental Report (cont'd.)

Environmental Monitoring

BNL has monitored its releases to the environment since its inception in 1947. Activities in 1947 were primarily administrative, as the Lab set up scientific departments and support groups. The use on site of radioactive materials or materials containing radioactivity is documented in records from 1948 onward.

Early environmental monitoring focused on radiation, and the data were reported in various internal BNL documents and in presentations at scientific meetings. They were also summarized in the Laboratory's annual progress reports, which were submitted to the U.S. Atomic Energy Commission, a predecessor to DOE.

Compared to today, early environmental monitoring was sparse and rudimentary and not subject to regulatory requirements. In addition, radiation protection limits took the form of agreements between the AEC and BNL, with guidance

from the National Council on Radiation Protection. No independent federal agency was responsible for establishing limits at this time.

Air samples were collected from a chain of monitoring stations established at a distance out to 10 miles in various directions from the center of the site, which encompassed 3,600 acres at the time. Water samples were collected from the sewage treatment plant and its point of discharge to a tributary of the Peconic River. Meteorological conditions were monitored from a 420-foot-high tower, constructed for that purpose.

The Lab's monitoring program also measured radioactive fallout from above-ground nuclear weapons tests conducted by the United States and the Soviet Union.

This report, titled "Radiological Emissions and Environmental Monitoring for Brookhaven National Laboratory, 1947-1961," is available at the Research Library. — Mona S. Rowe

Arrivals & Departures

Arrivals

- Simon R. Fox Biology
Stacey Ann Kuczewski ... Staff Services
John R. Lascari Plant Eng.
Mark S. Pidkowich Biology
David T. Troyan Env. Sciences
Haluk Utku NSLS

Departures

- Yury Blyakham Physics
Brigita Gordon Reactor
Theodore Lelle C-A
Daebuom Mun Business Systems
Erin L. Peters Biology

Golf Results

On May 21, at the first BERA golf tournament of 2001, 20 golfers teed off in a two-person scramble format at the Heatherwood Golf Club, which has a par-60 layout. The winners are:

"A" flight:
John Usher, Barry Karlin – 58

"B" flight:
Bob Larson, Paul Callegari – 56

Proximity to the flag:
Joe Carbonaro, Barry Karlin, Ed Gill, Norman Fewell.

Longest drive: Ken Rogers.

Hospitality News

'Picnic Night' June 22

On Friday, June 22, at 5:30 p.m., the Hospitality Committee will organize a Picnic Night at the Gazebo next to the apartments. Bring your own meat to cook and a side dish to share. The grill will be ready and there will be drinks and games for everybody. For information, call Nora Robles, 345-3204, or Luise Woltering, 244-7964.

Garden Plots

The Hospitality Committee announces good news for frustrated gardeners without land: BNL has garden plots available, you may start planting right away. For information, call Rumiko Taketani, Ext. 1004.

Footwear Required

For health and safety reasons, footwear must be worn around the swimming pool area. Flip-flops are acceptable.

Arrivals

Simon R. Fox Biology
Stacey Ann Kuczewski ... Staff Services
John R. Lascari Plant Eng.
Mark S. Pidkowich Biology
David T. Troyan Env. Sciences
Haluk Utku NSLS

Departures

- Yury Blyakham Physics
Brigita Gordon Reactor
Theodore Lelle C-A
Daebuom Mun Business Systems
Erin L. Peters Biology

Calendar

(continued)
Wednesday, 6/20

Divorced & Separated Support Group
noon-1 p.m., Berkner Hall, Room D. Mary Campbell, Ext. 4776, maryc@bnl.gov.

Weight Watchers' Registration
Noon, Brookhaven Center. \$89 for 10 weeks. Mary Wood, Ext. 5923.

***Brookhaven Lecture**
4 p.m., Berkner Hall. Gene-Jack Wang, Medical Department, "Brain Changes in Obesity."

Thursday, 6/21

BNL Amateur Radio Club
Noon, Room D, Berkner Hall. Agenda includes the planning of upcoming Field Day activities. Chris Neuberger, Ext. 6062.

BERA Bridge Club
7 p.m., Berkner Hall cafeteria. Morris Strongson, Ext. 4192.

Friday, 6/22

Women Engineers' Lunch Networking Meeting
Noon, Berkner Hall, Room A. Arlene Zhang, Ext. 5369.

Saturday, 6/23

Defensive Driving
9 a.m. - 3:30 p.m., Berkner Hall, Room B. \$23 per person. Send check to Empire Safety Council, care of Scott Zambelli, Box 670, Mount Sinai, NY 11766.

—WEEK OF 6/25—

Monday 6/25

Cooking Exchange
9:30 a.m.-12:30 p.m., Recreation Bldg. \$2 to cover the cost of ingredients. Marcia Leite, Ext. 1040, mhsleite@hotmail.com.

IBEW Meeting
6 p.m., Knights of Columbus Hall, Railroad Ave., Patchogue. A meeting for shift workers will be held at 3 p.m. in the union office. The agenda includes regular business, committee reports, and the president's report.

Wednesday 6/27

Noon Recital
noon., Berkner Hall The Long Island String Quartet & Albert Rhodes., tenor and narrator of English poetry.

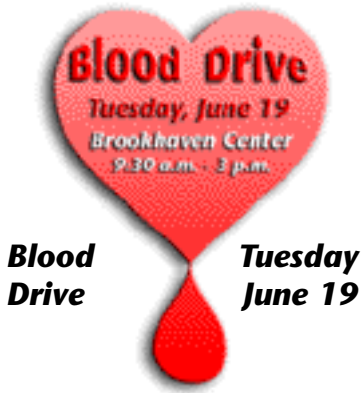
Brookhaven Advocacy Council Meeting
Open Session, 12:30-1 p.m., Berkner Hall, Room D. Nancy Warren, Ext. 7548.

—WEEK OF 7/2—

Tuesday, 7/3

Spirit Dinner Cruise
Dine and cruise around Manhattan. Tickets, \$75 each, include bus, dinner, entertainment. Andrea Dehler, Ext. 3347; Rosalie Piccione, Ext. 3160; or M. Kay Dellimore, Ext. 2873.

Note: This calendar is updated continuously and will appear in the Bulletin whenever space permits. Submissions must be received by the preceding Friday at noon to appear in the following week's Bulletin. Please enter the information for each event in the order listed above (date, event name, description, and cost) and send it to bulletin@bnl.gov. Write "Bulletin Calendar" in the subject line.



Take a moment to think about how your life would change if someone close to you needed a blood transfusion to live and no blood was available. Volunteers, ages 17 - 75, in good health, weighing over 110 lbs. can donate blood. To make an appointment at BNL's blood drive, send an e-mail to donateblood@bnl.gov, or contact Sue Foster, Ext. 2888. Include your name, telephone extension, and preferred donation time. Photo ID and social security number will be needed when you donate.

**Classified
Advertisements**

Placement Notices

The Lab's placement policy is to select the best-qualified candidate for an available position. Candidates are considered in the following order: (1) present employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present employees within the Laboratory; and (3) outside applicants. In keeping with the Affirmative Action Plan, selections are made without regard to age, race, color, religion, national origin, sex, disability or veteran status. Each week, the Human Resources Division lists new placement notices, first, so employees may request consideration for themselves, and, second, for open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people. Except when operational needs require otherwise, positions will be open for one week after publication. For more information, contact the Employment Manager, Ext. 2882; call the JOBLINE, Ext. 7744 (344-7744), for a list of all job openings; use a TDD system to access job information by calling (631) 344-6018; or access current job openings on the World Wide Web at www.bnl.gov/JOBS/jobs.html.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

MK2088. POSTDOCTORAL RESEARCH ASSOCIATES (NIH [NIDA] FELLOWSHIPS) - Positions are available beginning July 1, 2001, for research training in clinical neuroimaging applied to problems of drug abuse under an NIH Training Grant. Candidates should have an MD degree or equivalent and have a detailed interest in neuroimaging, or have a Ph.D in a clinical research area. BNL's relevant major equipment includes a whole-body 4-Tesla MRI scanner and two human PET scanners with associated clinical and basic science facilities. The program is limited to U.S. citizens and permanent residents. Program Director: S. John Gatley, Medical Department.