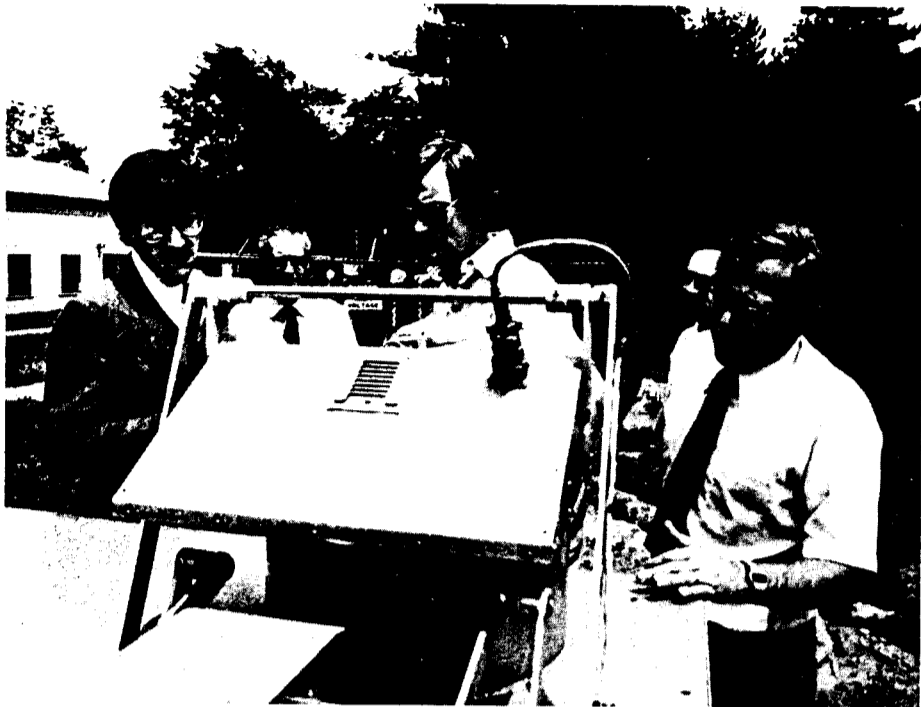


Recent Visitors

6-1751-78



During his day-long visit to the Laboratory on Monday, Eliot Cutler, (far left), Associate Director of the Office of Management and Budget, observed an automatic sequential precipitation sampler which is used to study acid rain. Cutler was briefed on the Laboratory's current projects and was particularly interested in BNL's environmental studies. With him at Meteorology are (left to right) Laboratory Director George Vineyard, George Hendrey, head of the Land and Fresh Water Environmental Science Group, Bernard Manowitz, Associate Chairman of DEE, and Paul Michael, head of the Atmospheric Sciences Division.

6-327-78



Some key officials of the Egyptian Government visited the United States recently in connection with the Egypt-U.S. Cooperative Energy Assessment. During their week's stay at Brookhaven, they engaged in discussions at the National Center for Analysis of Energy Systems regarding the developing countries energy program. On a tour of some Lab facilities, they were escorted by Associate Director Warren Winsche (at rear) and, at one of the stops, Y.Y. Lee (right) gave an explanation of the 7' Bubble Chamber.

DOE Workshop At BNL

6-1745-78



A Hydride Storage Reservoir symposium/workshop concluded a two-day session at Brookhaven on Wednesday. According to Matthew Rosso (right), who was in charge of the meeting, it was an idea exchange devoted to the specific topic of metal hydrides. The symposium was attended by about 50 representatives of other laboratories and industry, and was sponsored by DOE's Division of Energy Storage Systems. Talking with Rosso are session chairmen (from left) Paul Auh, David Dew-Hughes, Gerald Strickland and James J. Reilly.

Ocean Disposal Site Investigated

Peter Colombo, head of the Laboratory's radioactive waste program, Walter Becker and health physicist John Batdorf, are today aboard the research vessel ADVANCE II, participating in an Environmental Protection Agency (EPA) survey of an oceanic radioactive waste disposal site.

The site is located in the Atlantic at a depth of 13,000 feet, approximately 200 miles east of the Maryland Delaware coast. It is the deepest of the four major oceanic disposal sites used by the U.S. between 1946 and 1970. According to the EPA, an estimated 14,500 drums of radioactive material were deposited in this area about 20 years ago.

Over the last two years, Brookhaven has cooperated in the retrieval and analysis of two drums of radioactive materials, one from a depth of 2800 meters in the Atlantic and the other recovered from 900 meters in the Pacific.

On this trip, Colombo is scheduled to be one of those diving in the submersible, ALVIN, which is equipped with manipulators to lift up the cask. Prior to any retrieval, the diving team will examine the condition of the drums and determine the feasibility of recovering one of them for later analysis at BNL.

Over 30 researchers from various universities, U.S. Federal agencies and the Japanese Atomic Energy Research Institute will participate in the survey. Scientists

aboard the ADVANCE II will conduct a comprehensive program of water, sediment and biota sampling.

The Brookhaven team is responsible for assisting in the recovery of the drum and for its delivery to the Laboratory for analysis. In addition to Colombo, Becker will give technical assistance and Batdorf is charged with ensuring that no contamination is present aboard ship, during or after recovery. They plan to return to the Laboratory on June 28. If they bring an ocean cask with them, chemical, metallurgical and radiochemical analyses will be conducted on it, and comparisons made with the studies undertaken on the two casks previously recovered.

The practice of dumping radioactive wastes into the ocean was discontinued by the U.S. in 1970. The EPA is required by the "Ocean Dumping" Act of 1972 to set regulations controlling ocean disposal of all materials including low-level radioactive wastes. The disposal of high-level radioactive wastes in this manner is strictly prohibited.

The current investigation is the twelfth submersible dive since 1974 under the EPA's comprehensive survey program to determine the effects of past dumping of radioactive wastes and the feasibility of developing more comprehensive ocean disposal regulations and standards.

How You Exhale Is The Test

You step up and take a deep breath; into the cardboard tube which you have just placed in your mouth, you then forcefully exhale all of the air you can. The pen makes a jump. The line it and you are forming curves right, then continues for five seconds to the end of the graph. Your spirometer test is completed.

The spirometer, with which all BNL employees become acquainted during their annual physical exam, measures the subject's ability to move air in and out of the lungs. The testing can aid physicians in diagnosing certain respiratory diseases which produce characteristic patterns on the graph or spirogram.

Factors such as age and cigarette smoking affect the lungs elasticity and capacity, explains Dr. Robert A. Love of the Medical Department. The spirogram of a patient who has smoked 40 cigarettes daily for over 30 years shows an inability to force out the usual amount of air in the usual time. Testing is also important for workers whose jobs expose them to potentially dangerous inhalants such as asbestos, silica, fiberglass and coal dust.

In use for many years, spirometers have become increasingly sophisticated, although the basic operating principle is the same. Today, a fixed, horizontal cylinder with a moving piston has replaced the older inverted, counterweighted containers which had a pen arranged to monitor how much a forced breath has made a piston move. William Harold of the Nuclear Medicine Division states that electronic sensors have greatly improved recordings and have trimmed the bulky appearance of earlier machines.

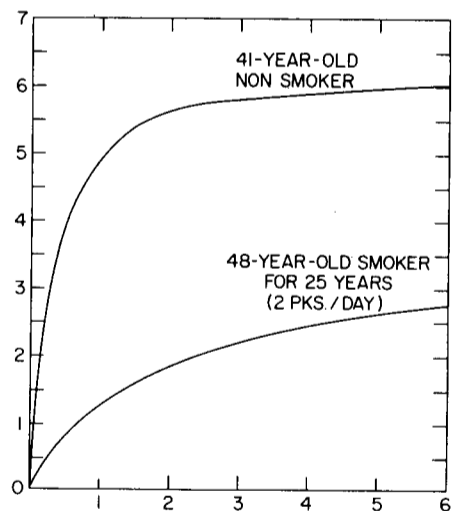
Physicians specializing in occupational medicine have found pulmonary function (spirometer) testing valuable in their evaluation and treatment of patients with obstructive lung disorders, such as emphysema.

According to Dr. Love, the spirograms of Lab employees generally fall within the acceptable range. Again, the graphs of heavy smokers are usually not as favorable as non-smokers. Sometimes, seeing the evidence before him or her, the test can deter one from smoking. Tests performed on many subjects in their early 20's produce "good, beautiful curves" because, Dr. Love suggests, fewer members of this age group

are cigarette smokers.

Increasingly, whether it's industry-related or general, amid the customary pokes and prods of your annual physical, you'll find the six-second puff into the spirometer.

— Rosanne Pagano



The graph above depicts normal spirometers for a smoker and a non-smoker. Doctors use the graphs to see how much air is exhaled in the first second, and how many liters of air the subject can exhale over a six-second period. Respiratory blockages in either the small or large airways of the lung can be detected from the initial portion and the remainder of the curve on the graph.

Weekend Tour

Biology's STEM is a 7 foot tall microscope that can picture individual atoms. Size aside, STEM is a delicate instrument with special requirements. To minimize vibration, it sits in a soundproof room on air springs, over six tons of concrete. STEM is featured in this weekend's tour of the Lab. Hours are 10:00 a.m. to 3:00 p.m., and the STEM mini tour runs continuously.

EXHIBIT CENTER

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6-905-78



A day-trip along Dune Road's seven miles in nearby Westhampton Beach impresses visitors with its enticing surf and singular dwellings. When the early morning fog burns off, you find yourself surrounded by remarkable estates and exceptional beaches.

The many striking homes up and down Dune Road are built by the wealthy who can, as one police officer noted, "afford to rebuild what the storms damage every year." Although the weather precludes the use of most external materials other than cedar, and LILCO's heating restrictions limit the number of windows the architect may include, ten or twenty new homes are constructed annually, here, on lots just large enough to meet zoning regulations.

Contractors say that Dune Road is experiencing a building boom even though construction costs alone can run to \$450,000 or more. No one mentions the price of beachfront property. One owner says he prefers Quogue, Long Island to the Riviera

more to the area than buzz saws and carpenter's spackling.

Three public ocean beaches located along Dune Road are Cupsogue, at the extreme western end, and to the east, Tiana and Ponquogue. Dressing rooms, showers, rest rooms, picnic tables, lifeguards and concession stands are available. Suffolk county residents are required to purchase a \$3 parking sticker, valid for 3 years, which admits one to the lot. A 50¢ per day parking fee is also imposed. Hot Dog Beach is a favorite among younger sun-fanciers in Quogue.

One resort open to the public for breakfast, luncheon and dinner is the Bath and Tennis Club and Hotel which overlooks the Atlantic Ocean in Westhampton Beach. Due to its beachfront location, the Club's exterior is weather-worn and does not prepare you for the attractiveness of its pink, green and white interior. Guests who pass up the discotheque and small specialty shops, will find the large, sunny dining room, which opens onto the surf, at the back of the Club.

Dinner selections include Sirloin Steak au Poivre Vert, Scampi Provençale and Breast of Capon Chasseur. In addition to a varied choice of appetizers, there are fresh, whole strawberries for dessert, Orange Napoleon or cakes, pies and tarts. Complete dinner, champagne included, will cost approximately \$30 per person.

The Dune and Deli Snack Bar, also in Westhampton Beach, affords a less varied but more modestly priced menu. For about \$3, sunbathers can enjoy a freshly made hamburger and ranch fries, soda and ice cream. The Snack Bar's rocky road ice cream is worth the wait you may encounter here.

For alcoholic refreshment, Dune Road residents recommend the Sandbox, Cat Ballou or the Tiana Beach Club, and Mimosa for a more elevated atmosphere although, they noted, the establishments "may not look like much from the outside."

In Westhampton Beach, Morgan's White Cap General Store sells canned goods, wood, ice and sundry items in addition to housing a "restaurant, rum parlor and dance hall." Locals say the food is good and outside patio dining is available. Seafood, chowder, steamers, sandwiches and ice cream are featured. Morgan's is closed at least until noon.

To enjoy an afternoon exploring the sights, food and drink along Dune Road, take Sunrise Highway to Exit 63 South and follow the signs to either of the drawbridges to the Westhampton beaches. Whether you're looking for architectural and natural beauty, or good beaches and lots of sun, you'll find them along Dune Road.

—Rosanne Pagano

6-904-78



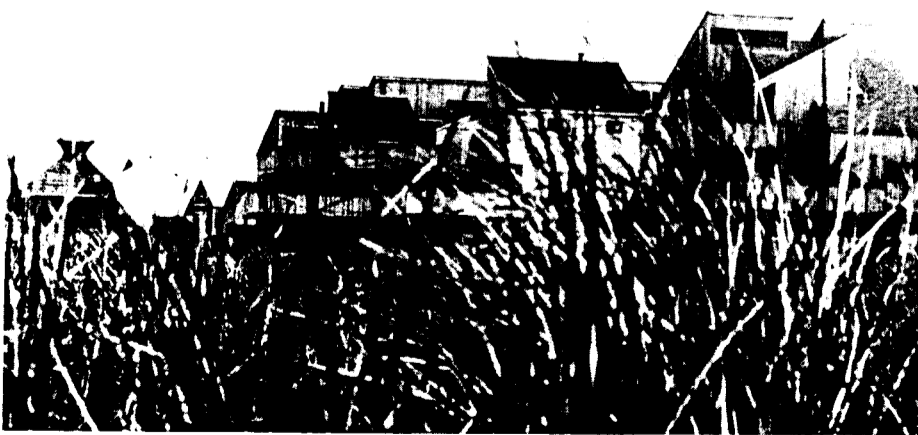
Roadside daisies by the bay.

or to California. His "house on the beach," (distinguished from a "beach house") was five years in the building.

The area's homes are both unique and alike in that, according to one native, each resident envisions his dwelling as an extension of himself. With the builder's personality as a foundation, he and the architect construct a home which reveals the owner's character and the architect's imagination to thousands of visitors yearly.

The grand residences on either side of Dune Road are well worth the drive to Westhampton Beach; but there is, after all,

6-902-78



Houses on the beach, not beach-houses.

Selected Reading

- Bull. At. Sci. 34, June 1978
Nuclear energy and the freedom of the West. A.D. Sakharov. 12-14
- Nuclear energy and independence. J. Rotblat. 19-20

- Chem. Eng. News 56, June 5, 1978
GAO urges realignment for DOE research labs. 5
- Art opens way for science. J.B. Eklund. 25-27 + New Sci. 78, June 1, 1978
It's a wonderful idea, but . . . A. Hope. 576-81

Arrivals & Departures

Arrivals

- Trevor J. Aggus..... Physics
- Juan L. Alvarez..... Plant Engrg.
- Patricia J. Anderson..... Personnel
- Edward Baker..... Accelerator
- Paul Blacher..... Plant Engrg.
- Robert P. DiNardo..... Instrumentation
- James Florakis..... Accelerator
- Louis C. Gerlach..... Nuclear Energy
- David V. Kipp..... Accelerator
- Niels Koudal, Jr. Accelerator
- William C. Metz..... Energy & Env.
- Gary A. Nintzel..... Accelerator
- Henry P. Serry..... Energy & Env.
- Philip W. Smith..... Nuclear Energy
- Edward D. Sperry, IV..... Accelerator
- Larry Tempesta..... Plant Engrg.
- Frederick Williams..... Plant Engrg.

Departures

- Phyleate Harris..... Energy & Env.
- Janet I. Jensen..... Nuclear Energy
- Christopher K. Mirabelli..... Biology
- Cathleen M. Worthington..... Tech. Info.

How Do You Drive?

The days of filling up a car's gas tank with a five dollar bill have gone the way of the Nehru collar. But there are still ways that costs can be reduced and gasoline saved.

William S. Webster, Manager of the Staff Services Division, notes that identical Lab-owned vehicles which receive the same maintenance, nevertheless record quite different miles per gallon of gasoline used. When highs of 12.3 miles per gallon are compared to lows of 5.7 miles per gallon, it can't be the vehicle, so it must be the driver.

He points out that prolonged idling, jack rabbit starts, and excessive speed all lead to a greater consumption of gasoline.

BNL cars and trucks are driven over one million miles per year. If the higher mileage per gallon were the norm, Webster estimates that 140,000 gallons of gasoline might be left unburned at a savings to the Lab of \$62,000 annually. Besides the obvious safety factor, responsible driving is both a dollar and energy saver.

Keep The Blood Flowing

6-1748-78



Marilyn Galli of the Technical Information Division will become one of the newest members of BNL's "gallon club," after she

contributes to the 10th BNL Blood Drive on June 28 and 29. She is pictured with Jerry Blackford of the Budget Office who received his gallon pin last June. The pin is awarded to donors who have given blood eight times.

The 1978 Blood Drive's goal is 900 pints, but at press time only 660 pledges had been received. More are urgently needed if the drive is to reach its goal. The blood program is important to all employees, since BNL's support insures that all personnel and their families will continue to be eligible for unlimited blood replacement during the coming year.

The Bloodmobile will be at the Gym from 10 a.m. to 3 p.m. on June 28 and 29, and it doesn't take long to donate blood.

If you haven't sent in your pledge card yet, it's not too late to do so. If you can't find your card, use the form below, or simply call Janice Lamb or Jerry Kinne at Ext. 3334 as soon as possible.

Remember—you may not be dying to give blood, but some day you may be dying to get it.

Name

Bldg. #

Please Print

BROOKHAVEN NATIONAL LABORATORY BLOOD DONOR PLEDGE

I hereby pledge to donate blood during the 1978 BNL Blood Drive to be held at the Gymnasium from 10:00 a.m. to 3:00 p.m., Wednesday, June 28 and Thursday, June 29, 1978.

Please do not indicate a preference unless necessary. I can donate only _____ Signature.....Life #.....
on (day)..... at (time)..... Dept.Lab. Phone.....

Please return this completed pledge to G.C. Kinne, Bldg. 460.

Jazz Festival

Jazz buffs will be interested in three concerts scheduled in Suffolk this summer. Produced by the International Art of Jazz, Inc., and sponsored by the European American Bank, the concerts are free. The following is the schedule:

Friday, June 30, at Lawn of Fine Arts Building Southampton College (Rain Location: Inside Fine Arts Building), featuring Dick Hyman and the East End All-Stars (Bob Haggart, Bob Rosengarden, Hal McKusick, Toots Thielemans).

Friday, July 28 at Waterfront Park, Main Street, Northport (Rain Location: Northport Jr. High School, Laurel Ave.), featuring Maxine Sullivan and the International Art of Jazz Ensemble.

Friday, Sept. 1 at Belmont Lake State Park, Babylon (Rain Location: Robert Moses Jr. High School, Phelps Lane, North Babylon), featuring Lionel Hampton & His Orchestra.

All concerts are from 8:00 p.m. to 10:00 p.m.

BNL Hot Line

Dial Ext. 2222 for all emergencies.

Reports Available

The following reports are now available to the Laboratory Staff and to Affiliates of the DOE, AUI, and NRC. Others may purchase the reports from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. Staff members should call Ext. 3484:

- BNL 50724 \$8.00
The Potential Need for Fusion in the U.S. Energy System. E. Beardsworth and J. Powell
- BNL 50725 \$5.25
Analysis of Past and Expected Future Trends in U.S. Energy Consumption, 1947-2000. D.J. Behling, Jr.
- BNL 50728 \$4.00
Tritium Storage Development. Progress Report No. 10, October - December 1976. P. Colombo, et al.
- BNL 50729 \$4.00
Tritium Storage Development. Progress Report No. 11, January - March 1977. P. Colombo, et al.
- BNL 50731 \$4.00
Linear Accelerator Driven (LADR) and Regenerative Reactors (LARR) for Nuclear Non-Proliferation. M. Steinberg, et al.
- BNL 50733 \$4.50
Tritium Storage Development. Progress Report No. 12, April - June 1977. P. Colombo, et al.

6-810-77

BROOKHAVEN BULLETIN

Published weekly for the employees of BROOKHAVEN NATIONAL LABORATORY

BERNICE PETERSEN, Editor
ANNE BAITTINGER, Staff Writer
DOUG HUMPHREY, Photo-Journalist

40 Brookhaven Ave., Upton, N.Y. 11973
Telephone (516) 345-2345

CARL R. THIEN, Public Relations Officer

New York Train Trip

The Hospitality Committee is planning a group railroad trip to the city on Wednesday, July 5, 1978. Departure will be at 8:32 a.m. from the Patchogue LIRR station. Round-trip fare for adults is \$2.45, children under six years ride free.

Reserve a ticket by sending your fare through the U.S. mail to P.O. Box 322, Upton, New York 11973, no later than Thursday, June 29. Make checks payable to "Brookhaven National Laboratory." Your tickets will be given to you at the train station. Refunds will be made only if cancellations are received by the Friday preceding the scheduled trip.

Children's Rec Program

The Recreation Office requests that all registrations for children's swimming lessons and the on-site recreation program be submitted before Friday, June 30.

Registration forms may be picked up at the Personnel Office or at the BERA Film Service Office between 9:00 a.m. and 1:00 p.m.

Cafeteria Menu

Week Ending June 30, 1978

Monday, June 26
Corn chowder (cup) .30 (bowl) .40
Beef chop suey on rice 1.30
Scrambled eggs, sausages & fr. fr. 1.15
Hot Deli - Pastrami (on bread) 1.15 (on roll) 1.25

Tuesday, June 27
Beef noodle soup (cup) .30 (bowl) .40
Knockwurst and sauerkraut 1.15
Roast chicken w/stuffing and 1 veg. 1.20
Hot Deli - Veal pattie & peppers hero 1.25

Wednesday, June 28
Cream of potato soup (cup) .30 (bowl) .40
Braised Meatballs à la mode w/buttered noodles 1.25
Fried filet w/fr. fr. 1.25

Special:

8 Foot Hero w/ham, cooked salami, mortadella, bologna, provolone cheese, lettuce, marinated tomatoes, onions, green peppers
60¢ per inch

Thursday, June 29
Chicken vegetable soup (cup) .30 (bowl) .40
Cheese ravioli w/1 veg. 1.10
Sauerbraten and potato pancake 1.45
Hot Deli - Italian sausage & peppers hero 1.25

Friday, June 30
Fish chowder (cup) .40 (bowl) .50
Spaghetti w/clam sauce 1.10
Breaded pork chop and 1 veg. 1.50
Hot Deli - Smoked tongue (on bread) 1.15 (on roll) 1.25

Mountain Club

Everyone is welcome to come to a beach party at the National Seashore beach, on Friday, June 30, at 6 p.m. To get there go to Smith Point and park on the west side of the parking lot. Don't go through the tunnel, but take the walkway west leading past traffic circle to the Ranger trailer. The meeting place is on the beach, one-half mile west of the trailer. Bring your own provisions and, if you plan to cook, take along a stove as no campfires are permitted. For further information, call Don David on extension 3942.



"Anachems" - both Laboratory & Red League Champs - (from left to right) L. Newman, R. Wilson, P. Klotz, E. Gill, C. Bachsmith, T. Prach.



"Good Guys" - Purple & White League Champs - (from left top) D. Murgatroyd, E. Murgatroyd, M. Austin, J. Austin.



"Lickety Splits" - Pink League Champs - (from left to right) C. Sherry, F. Scesney, H. Keeley, M. Grahn. Not present, C. Holland.

Strawberry Bike Tour

For those of you (possibly summer employees or guests) who haven't feasted on our famous Long Island strawberries, the Bicycle Club offers the Strawberry Shortcake Ride this Sunday, June 25th. We'll meet at Berkner Hall at 8:30 a.m. and cycle to Sabatt's Farm in Baiting Hollow where pick-your-own strawberries are 50¢ a quart (plus 10¢ for the box if you don't bring your own). About half-a-pint is needed for the dessert, but pick extra berries to take home if you like; a car will be available to cart them back to the Lab. After a bag lunch at nearby Wildwood State Park we return to the Lab Recreation Building for our reward - fresh, home-made strawberry shortcake for all.

The distance each way is about 15 miles, the terrain is gentle, and we'll ride at a casual pace. Registration fee is only 75¢ and that includes the super dessert. We hope to see our cycling regulars plus lots of newcomers and summer people. If you like strawberries, or even if you don't, join us for a pleasant ride.

We'll cancel for rain; for other questions, call Bob Monaghan, Ext. 4824/4688 or 744-5098.

1978

Bowling Champs

-Photos by Reben



"New Horizons" - Black & Blue League Champs - (from left to right) R. Brehm, B. Brehm, J. Carroll, C. Beckner. Not present, C. Holland, R. Holland.



"Sparks" - Green League Champs - (from left to right) J. Cochrane, G. Spira, B. Brehm, J. Carroll, R. Sick. Not present, B. Kristiansen.

Gym Closing

The gymnasium will be closed starting on Monday, June 26 and will reopen on Friday, June 30 at 11:00 a.m.

This closing will not affect the swimming pool schedule or usage of the locker rooms.

BNL Dance Club

The BNL Dance Club has discontinued dance lessons for the remainder of June, July and August. Registration will take place in early September for the Fall and Winter sessions. Watch for the date in the Bulletin.

Golf

A golf tournament is scheduled for Monday, June 26, at the Bellport Country Club. Tee off time is twelve noon.

Entrants are requested to send \$1.00, which will be used for prizes, to B. Briscoe, Building 930. Briscoe may be reached by calling extension 4592.

Softball

League I

Six Pax 19 (2-2) Titans 3 (1-3)
Ed Meier Jr. (3 for 4 with a HR) and Charlie Bohnenblusch (a bases loaded triple) led the Six Paxs.

Standings (as of June 19)

Division I		Division II	
Ravens	3-1	Phoubars	3-1
Six Pax	2-2	Blue Jays	3-1
A.M.D.	2-2	Dirty Sox	2-2
Old Timers	0-4	Titans	1-3

League II

Week of 6/7/78
Strange Encounters (1-0) 10
Nuke Powers (0-2) 5

Homerun by Terry Owens of Strange Encounters.

Charlie Browns (2-0) 9 Radicals (0-2) 7
Second triple of the year by Hoover O'Hara paced the Charlie Browns.

Lilco (1-0) 24	DEE (0-1) 6
Lilco (2-0) 23	NSLS (2-1) 6
Cardinals (1-1) 16	Medical (0-2) 4
Roga (2-0) 23	DEE (0-2) 5

Homeruns for Lew Snead and Ed Rock.

Week of 6/14/78
Charlie Browns (3-0) 10
Strange Encounters (1-1) 7

Lead off triple by Rich Chester paced the Charlie Browns. Another fine game for Hoover O'Hara. Vinnie Lettieri had a tremendous homerun for Strange Encounters.

Roga (3-0) 28 NSLS (2-2) 1
Two homeruns for Ed Rock.

Cardinals (2-1) 15 Radicals (0-3) 14
Homerun for Eric Frak.

Lilco (3-0) 19 Nuke Powers (0-3) 6
Medical (1-2) 15 DEE (0-3) 12

Standings

(as of June 14)

Division A		Division B	
Roga	3-0	Lilco	3-0
Charlie Browns	3-0	Cardinals	2-1
NSLS	2-2	Medical	1-2
Strange Encounters	1-1	DEE	0-3
Radicals	0-3	Nuke Powers	0-3

Employee League

Turkeys - Who's On First

Who's on First forfeited Monday evening's game to the Turkeys. Come on guys, read those schedules!

Balls & Strikes 15 - Thrids 9

Another fine pitching performance by Marsha Kipperman with excellent hitting and fielding by all teammates.

Diamonds 17 - Trouble II 16

Dotty Lundgren went 4 for 5 and Carrie Miller played a good defensive game.

E-Z Riders 13 - Oh Kays 10

Due to the dedicated cheering of the disabled Mary Jane and Ricky, it was not surprising that the E-Z Riders beat last year's first place winners, the Oh Kays. Mike Hahle had two home runs, one of which went so far that they're still looking for the ball, and Larry Musso had one home run.

TNT 7 - Who Cares 4

The TNT's were back to their old wonderful selves winning by a score of 7-4 over Who Cares. Artie Coone has a homer and a spectacular double play by Jeanne Weber and Howie Bell even won cheers from the opposing team.

Women's All-Star Game

The BNL Women's All-Stars will be playing a softball game against Woodson's girls of Riverhead on Sunday, June 25 at 5:00 p.m. at the Brookhaven Recreation Park. Come on down and lend your support.

Runner's Corner

There will be an organizational meeting of the Roadrunners on Tuesday, June 27 at noon in the Conference Room, Building 318. Topics to be discussed include: plans for the fall race; the club newspaper; the N.Y. City Marathon; and a special BNL summer fun run. All runners and friends are cordially invited. Contact Ted Landry Ext. 2959 for further information.

