

BNL Issues Environmental Report

BNL has published its 1991 Site Environmental Report. Authored by Jan Naidu, Barbara Royce and Robert Miltenberger of the Safety and Environmental Protection Division, the report provides an assessment of the Lab's impact on the environment and presents the results of Brookhaven's environmental monitoring program for calendar year 1991.

According to Naidu, who is responsible for producing the annual report, it takes about a year to analyze data, write the text, compile figures and complete the review process for publication. The document is sent for review to the U.S. Department of Energy's Chicago Field Office as well as to the agency's headquarters in Washington, D.C.

Says Naidu, "Brookhaven performs environmental surveillance to determine whether operation of the Lab's facilities is having an impact on the environment. In addition, effluent monitoring is performed to determine whether discharges to the environment are maintained below release limits specified by applicable environmental standards or state and federal permits."

The report summarizes data for external radiation levels; radioactivity in the air, rain, surface water, groundwater, potable water, soil, vegetation, and aquatic plants and animals; and water quality, metals, organics and petroleum products in surface water, groundwater and potable water.

The 1991 Site Environmental Report has already been distributed to the Suffolk County Department of Health Services, the New York State Department of Environmental Conservation, the New York State Department of Health, the Environmental Protection Agency and the Department of Energy. The report is also available to employees, who may obtain a copy at the Public Affairs Office, Bldg. 134.

The Brookhaven Site

The Lab is located close to the geographic center of Suffolk County and encompasses about 2106 hectares (5,265 acres). Only about 680 hectares (1,700 acres) of this property have been developed to accommodate the 360 buildings and facilities on site; the rest of the property is undisturbed woodlands.

Brookhaven uses about 16.3 million liters (4.3 million gallons) of groundwater each day to meet potable water plus heating and cooling requirements. The Lab has a water treatment plant and a sewage treatment plant.

Like most eastern seaboard areas, BNL is a well-ventilated site. The prevailing ground-level winds are from the southwest during the summer, from the northwest during the winter, and about equally from these two directions during the spring and fall. The Lab receives about 119 centimeters (47 inches) of rain each year, with about half of this being

Jan Naidu, Barbara Royce and Bob Miltenberger, authors of BNL's 1991 Site Environmental Report, shown at a sampling well located down gradient from the Central Steam Facility.



Photos on this page by Roger Stoutenburgh

absorbed into the ground to replenish groundwater and the other half evaporating.

Groundwater flow in the vicinity of Brookhaven is controlled by many factors. In general, however, groundwater in the northeast and northwest sections of the site flows towards the Peconic River. On the western portion of the site, groundwater tends to flow towards the south. Along the southern and southeastern sections of the site, the groundwater flow tends to be towards the south to southeast.

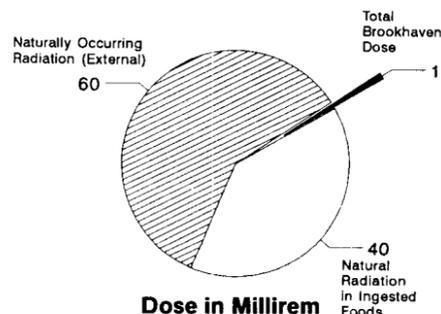
1991 Report Summary

• **Airborne Releases** — Most of the airborne radioactive effluents originate from four facilities used to conduct medical or physical-science research — the High Flux Beam Reactor, the Medical Reactor, the Brookhaven Linac Isotope Producer and the Van de Graaff in Bldg. 901.

The predominant radionuclides released were argon-41, oxygen-15 and tritium. Combined, these radionuclides produced a radiation dose of about 0.17 millirem at the site boundary, which represents a 0.3 percent increase above natural background radiation in Suffolk County.

These releases were within all state and federal limits. Radiation dose to individuals is usually expressed in "rem." A "millirem" is a thousandth of a rem. As an example, natural background radiation in Suffolk County is about 100 millirems. Natural background radiation comes from the sun and outer space, as well as from naturally occurring radioactive materials present in the earth, in housing materials and in food and water.

In addition to radioactive releases, nonradiological effluents were generated from about 70 New York State-permitted discharge points. These



Annual radiation dose to an individual due to natural background radiation and Brookhaven Lab operations.

releases included combustion products from burning fuel used to operate the Lab's central steam facility, plus emissions from small-scale grinding, welding and painting operations. All releases were within state permit limits.

• **Liquid Discharges** — Liquid discharges from Lab operations are released to the environment either as surface-water releases to the Peconic River through the sewage treatment plant or as direct releases from certain facilities to one of seven recharge basins on the property. These discharges are monitored quarterly, and all are subject to the requirements specified in a New York State permit for the site.

Of the seven release points, Lab operations had no impact at five locations, one release point had elevated iron concentrations, and one periodically contained trace concentrations of radioactivity in such small amounts that they were all well within the state drinking water standard.

The discharge from the Lab's sewage treatment plant to the Peconic River is monitored daily, with downstream on-site measurements made weekly and downstream off-site measurements taken at wider intervals. Except for low pH, attributable to rainfall, and occasional elevated levels of 1,1,1-trichloroethane, an organic chemical used on site as a degreaser, Brookhaven's radiological and nonradiological discharges met the state permit release limits and the more stringent Lab administrative limits.

• **Groundwater** — Groundwater is monitored for radiological and non-

(continued on page 2)



The organizers of the joint particle and nuclear physics workshop: (standing, from left) John Donoghue, University of Massachusetts; Martin Comyn, TRIUMF; Peter Yamin, BNL; Hywel White, Los Alamos National Laboratory (LANL); Alan Carroll, BNL; Carl Dover, BNL; Greg Bock, Fermi National Accelerator Laboratory; John McClelland, LANL; (seated, from left) Tim Londergan, Indiana University; Ken Heller, University of Minnesota; Don Geesaman, Argonne National Laboratory; and Toshio Numao, TRIUMF. Missing: Bill Reay, Ohio State University.

Intersecting Interest in Hadrons

Particle and nuclear physicists are finding common ground in their shared use of proton and other hadron beams at existing accelerators, including BNL's Alternating Gradient Synchrotron. In addition to Brookhaven, other institutions with hadron-beam facilities at which such physics could be done include Fermi National Accelerator Laboratory, Indiana University, Los Alamos National Laboratory and TRIUMF.

So, to explore the ground between particle and nuclear physics that could be covered by their machines, these institutions sponsored a second workshop on "Future Directions in Particle and Nuclear Physics at Multi-GeV Hadron Beam Facilities," at BNL, March 4-6.

During the meetings of five working groups and one subgroup, the 225 participants discussed possible experiments yet to be done in the areas of lepton physics, hadronic weak interactions, hadron and nuclear spectroscopy, hadron and nuclear dynamics, spin physics and eta physics, respectively.

In addition to agreeing to meet again next fall, all participants concurred that, because of the way the U.S. Department of Energy is organized and distributes funding, much important physics is being overlooked due to the overlap of the particle and nuclear fields. Since the physics in this region is interesting, all expressed hope that it would get better consideration in the future.

Meet the New Mr. Clean

It is too clean, too massively imposing and too well designed to be called a mere garbage truck — a refuse-collection vehicle could be more like it.

It began making its rounds on site, near the end of March — but anyone who isn't on the night shift will never see it in action. During the day, you can see it parked in back of Bldg. 326 — gleaming in the sunshine.

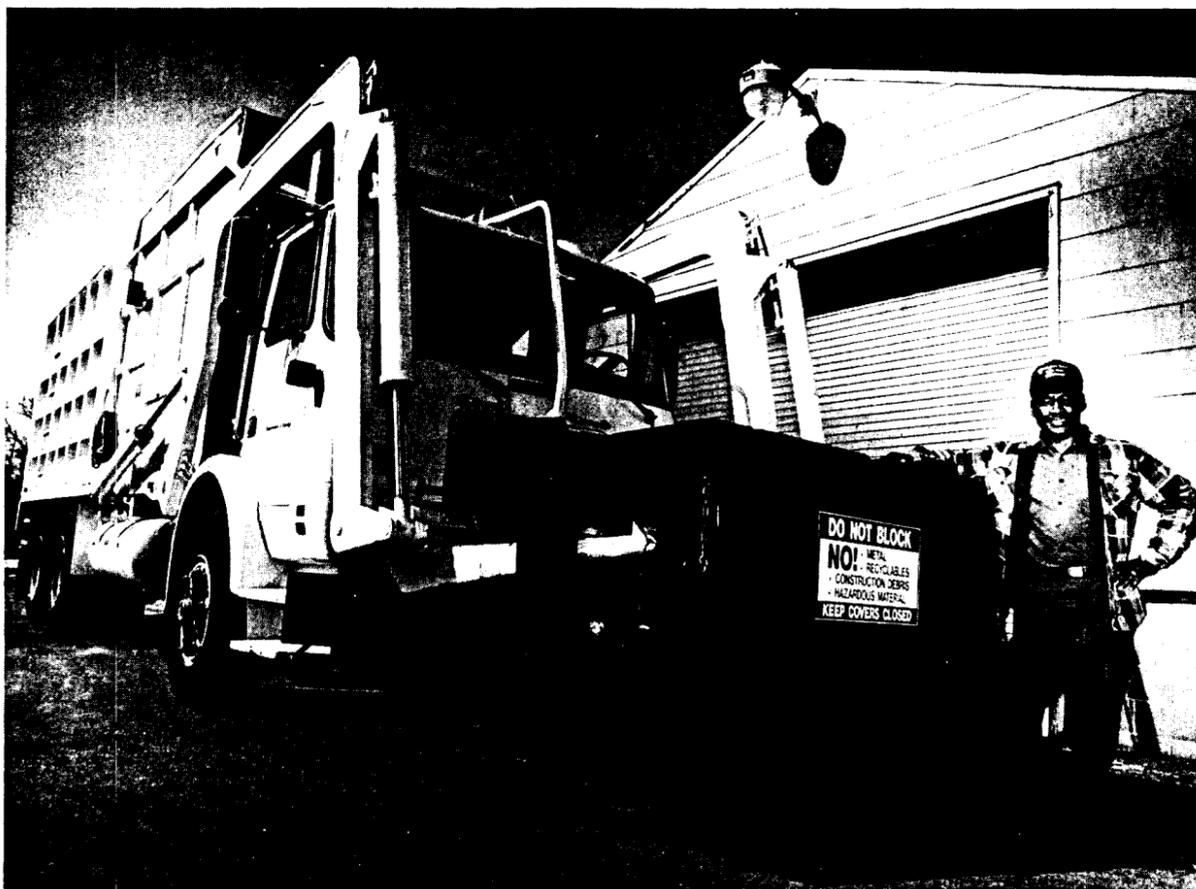
It is the Lab's new, 36-yard, 10-wheel White GMC sanitation-white refuse truck, operated by the Site Maintenance Group of the Plant Engineering Division. It replaces two 16-yard conventional forest-green trucks that have been used on site for 25 years.

Not only does the new truck have over twice the capacity of one of the old ones, but it also is much more efficient to operate — requiring just one person both to drive it and tip the dumpsters, and fewer than half as many trips to the Brookhaven Town landfill in Yaphank. The old trucks required three people — one to drive and two to handle the dumpsters — and each had to be emptied daily.

Buying the new truck and replacing the 175 old one-to-two-yard dumpsters on wheels with 135 two-to-four-yard containers with handles, however, allows garbage collection at BNL to be a one-person operation. So, BNL's one and only refuse collector now is Herb Harris (pictured).

While collecting refuse used to be dirty work, nowadays, Harris doesn't have to get his hands dirty: To empty dumpsters, the truck's hydraulic front forks fit into handles on the side of each dumpster and lift the container over the cab. As the forks lift, the truck's cover automatically opens, allowing the refuse to be spilled into the truck's 25-foot body.

The new truck is too long to fit into the parking lots, where most dumpsters are kept, to do its job



Roger Stoulenburgh

when all the BNLers with day jobs have jammed the spaces with cars. Hence, Harris has an early morning job — one that starts at 3:30 a.m. and ends by noon. After dumping each load he employs the truck's built in wash-out and disinfectant system to keep the new Mr. Clean clean.

Meanwhile, one of the old trucks will be recycled — to be used for mixed-paper recycling that will soon be introduced on site. Maintaining BNL's new refuse-collection vehicle and its recycled old garbage truck will continue to be a task for the Staff Service's Division Motor Pool.

BERA Election Tie Forces Runoff

For the first time in the history of elections for the Executive Board of the Brookhaven Employees Recreation Association [BERA], two candidates have tied, necessitating a runoff between Augie Hoffman, Physics Department, and Denise Monteleone, Biology Department.



Augie Hoffman



Denise Monteleone

Employees of BNL, AUI, DOE and all other permanent, on-site employees may vote for one of the two candidates from today, Friday, April 9, through next Friday, April 16, from 9 a.m. to 1:30 p.m. at the BERA Sales Office in Berkner Hall.

After the elections, results will be published in the Bulletin.

Notice for U.S. Permanent Residents

In fall 1992, U.S. permanent residents were advised in the Brookhaven Bulletin of new requirements imposed by the Immigration and Naturalization Service (INS) to update the Resident Alien Card ("green card") before August 1.

These requirements have been challenged in federal court, and, as a result, the INS suspended them in March 1993. Those persons who have not yet acted upon the new requirements may therefore ignore them pending a future announcement in the Bulletin.

Arrivals & Departures

Arrivals

George T. Capetan.....Plant Eng.
 Roger C. Connolly.....RHIC
 Anthony J. Guadagni.....Con. & Proc.
 William W. Mac Kay.....RHIC
 George W. Rundlett.....S&EP
 Christopher G. Saltmarsh.....RHIC
 Donald M. Shea.....RHIC
 Xiaonan Zheng.....Chemistry

Departures

This list includes all employees who have terminated from the Lab, including retirees:

Mary Doroski.....Mgt. Info. Sys.

Winners' Circle

Employees with ideas for enhancing Lab safety or saving BNL money in areas outside their own job responsibilities should consider submitting their suggestions to the Employee Suggestion Program (ESP). ESP forms are available in department and division offices and through Personnel, Bldg. 185. An original idea could win 10 percent of the estimated savings, up to a maximum of \$10,000.

Congratulations to the following BNLers who have entered the ESP winners' circle:

While still working as a technician with the National Synchrotron Light Source Department, retiree Kenneth Riker, noticed that 10-inch fans available from the BNL stockroom required fan guards. As a result of Riker's suggestion that fan guards be added to stock, they are now stock item number A-33496. For this safety suggestion, Riker was awarded \$25.

Rex Garcia, a police lieutenant in the Safeguards & Security Division, suggested that Lab bicycles violate

Note to Employees:

Attendance at lectures, meetings and other special programs held during normal working hours is subject to supervisory concurrence.

New York State vehicle and traffic laws when used after dark without lights. Garcia was awarded \$25 for this safety observation, which has resulted in bicycle headlights being added to stock and is thus expected to reduce risks associated with nighttime bicycle riding.

All departments and divisions are asked to order headlights from stock for their bicycles, using stock number H-27732. Also, a reflector kit, stock number H-27724, is now available.

Inside Info

Senior Project Engineer Tasneem Khan and Senior Scientist John Baum, both in the Department of Nuclear Energy, coauthored the paper "Doses to Worker Groups in the Nuclear Industry," which won the Editors' Award as best paper of the year in the journal *Radiation Protection Management*. The paper was published in the November/December 1992 issue.

The Brookhaven Bulletin won an Award of Achievement in the Technical Publications Competition of the New York Chapter of the Society for Technical Communications (STC). This is the seventh out of seven years that the Bulletin has earned an STC award.

Report

(cont'd)

radiological parameters at over 150 locations on site and at over 20 locations off site.

In 1991, samples taken on site at locations down gradient of past waste disposal sites, the current waste handling area and previously identified spill sites continued to show radiological metallic and/or organic compounds present in these areas, in some cases above the drinking water standard. These areas are being investigated and will be cleaned up as part of the Lab's Superfund activities.

"Employees should note," says Naidu, "that our drinking water on site does not come from wells in these areas. Further, the Lab's drinking water is monitored routinely to make sure that it meets the standard."

The off-site sampling program, conducted in cooperation with the Suffolk County Department of Health Services, includes quarterly sampling of over a dozen private wells at residences close to the Lab site. In 1991, trace amounts of tritium, a radioactive isotope of hydrogen, were detected in three wells, at concentrations well within the drinking water standard. A fourth private well showed organic constituents above the standard, but the well is equipped with a carbon filtration unit so that water supplied to the residence meets the standard.

• **Soil and Vegetation** — Soil and vegetation in local farms situated around the Lab site were sampled in June 1991 as part of a cooperative program between Brookhaven and the Suffolk County Department of Health Services. No contaminants

attributable to Brookhaven releases were detected in any of the samples.

• **Fish** — In collaboration with the Fisheries Division of the New York State Department of Environmental Conservation, Brookhaven has an ongoing program to collect fish from the Peconic River and surrounding fresh water bodies. The fish are analyzed for radioactivity to determine impact of liquid discharges to the Peconic River. Based on the sampling for 1991, a person who ate a year's total of 15 pounds of fish from the Peconic would receive an estimated dose of 0.64 millirem. This represents a 1.6 percent increase above the internal radiation dose that a person receives each year from naturally occurring radioactive material normally found in a daily diet.

In summing up the report's findings, Naidu says that if a person lived

at the site boundary, ate fish from the Peconic River and drank well water from the area, the projected impact from Lab operations would have been a small increase in radiation dose. For 1991, that hypothetical individual would have received, at the most, an additional 1 millirem. This represents about a 1 percent increase in the radiation dose that a person receives from natural background radiation here in Suffolk County and is 0.2 percent of the New York State limit for the general public.

As a point of comparison, adds Miltenberger, naturally occurring radionuclides in foods contribute an internal dose of about 40 millirem each year to an individual. For example, eating a banana a day contributes a dose of 2 to 3 millirems a year, from potassium-40.

— Mona S. Rowe

Let's Dance

Those with or without partners are invited to sign up for up to eight weeks of beginners' tango and Texas two-step lessons, with the BNL Ballroom, Latin & Swing Dance Club.

This series will be offered Wednesdays, from 5:15 to 6:30 p.m., usually in the North Ballroom of the Brookhaven Center. The cost is \$15 per person, payable in a check to the club. To register, send a check to Marsha Belford, club president, Bldg. 134, or bring it to the first class.

For more information, call Nedy Santiago, vice president, Ext. 3402.

Insurance Rep At TFCU Table

Jamie Stewart, a representative of the CUAIS Insurance Agency, will be at the Teachers Federal Credit Union (TFCU) information table in Berkner Hall, on Tuesday, April 13, from 11 a.m. to 1 p.m., to provide free price comparisons on auto and homeowners insurance. For an exact comparison, bring a copy of your current policy.

PSI Meeting

"Bias-Free Language" will be discussed by Sandra Sullivan, a senior librarian in the Department of Nuclear Energy, at the next meeting of the Upton Chapter of Professional Secretaries International (PSI), on Tuesday, April 13, at 6 p.m., in the south dining room of the Brookhaven Center.

For more information, call Sharon Jones, Ext. 2493, or Mary Blaszyk, 632-6180.

Tennis Ladder

The Tennis Committee announces the start of the 1993 tennis ladder, which will begin on Monday, April 12, and run through October 29. Players of all levels who are employees or summer visitors are eligible to join the ladder, and those interested should sign up at the BERA sales office, where the rules are posted. The entry fee is \$1.

During the first two weeks, open challenges are allowed at any level on the roster. After that, a player may only challenge players in the same row of the ladder or one higher.

Participants are encouraged to play at least one challenge match per week. The challenger is expected to provide a can of new or once-used balls. Unless players agree beforehand to another scoring system, the first player to take eight games wins, with a 12-point tiebreaker played in the event of a 7-7 score.

Last year, after many lively contests, the top three rungs were finally held by:

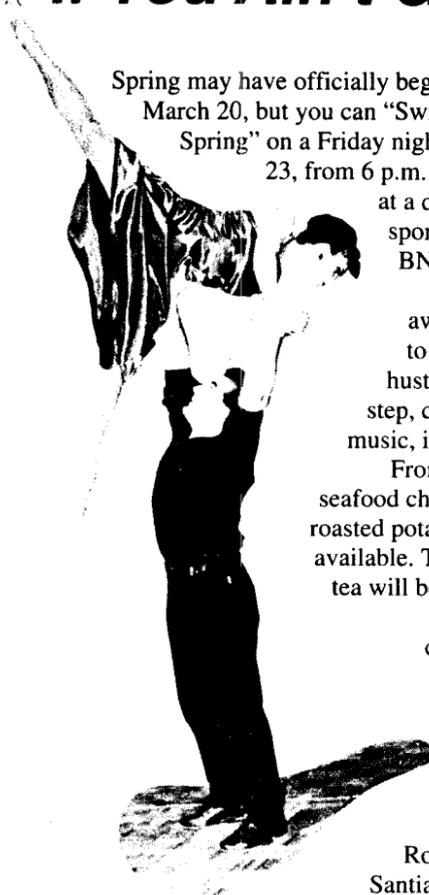
I 1. Om Singh, 2. Joe Carbonaro, 3. Frank Kito, 4. Peter Vanier

II 5. Paul Blacher, 6. Henry Chou, 7. Mikhail Agamalyan, 8. Donald DiMasimo

III 9. Ed Gill, 10. Rudy Alforque, 11. Ken Perkins, 12. Arnold Stillman.

For more information, contact Peter Vanier, Ext. 3535.

Spring Don't Mean a Thing If You Ain't Got That Swing!



Spring may have officially begun at 9:41 a.m. on March 20, but you can "Swing Into Spring" on a Friday night — April 23, from 6 p.m. to 11 p.m. — at a dinner-dance sponsored by the BNL Dance Club.

Dance the night away — whether you like to swing, electric slide, hustle, mambo, Texas two-step, cha cha, fox trot, merengue, tango, waltz, etc. Whatever your style of dance music, if it is from the 40s to the 90s, DJ Lou Naglieri will be playing it.

From 6 until 8 p.m., help yourself to a lavish, three-course buffet, including seafood chowder, a salad bar, chicken piccata, sliced flank steak, fettucini alfredo, oven-roasted potatoes, garden-medley vegetables and green beans amandine. A cash bar is available. Three dessert selections — apple pie, brownies and carrot cake — coffee and tea will be served from 9-10 p.m.

Midway during the evening, you'll witness "Dance Magic," the exciting cabaret-dance floor show starring U.S. Ballroom Champion Giny Rae and her partner Peter Sciuca, shown in the accompanying photos performing their award-winning dance routine. And, throughout the evening, there will be drawings for door prizes and other offerings.

Tickets are \$20 per person in advance, or \$25 at the door. To purchase your advance tickets, contact: Violet Bezler, Ext. 3771, Bldg. 510; Connie Economos, Ext. 2594, Bldg. 130; Jack Guthy, Ext. 4411, Bldg. 750; Ron Ondrovic, Ext. 4553, Bldg. 355; Susie Perino, Ext. 2477, Bldg. 134; Nedy Santiago, Ext. 3402, Bldg. 701; or Liz Seubert, Ext. 2346, Bldg. 134.

Sign Up for Disney, And WalkAmerica

Time is running out to sign up for the following two BERA activities. For more information on either, call Carolann Zebrowski, Ext. 3347, or M. Kay Dellimore, Ext. 2873:

• **WalkAmerica** — The BNL-BERA Team will join the 23rd March of Dimes WalkAmerica for Healthier Babies on Sunday, April 25. Pick up a sponsor sheet at the BERA Sales Office. If you're a repeat walker who has already received a sponsor sheet, call Dellimore for BNL instructions.

• **Disney World** — To sign up for BERA's third annual trip to Disney World in Florida, October 6-12, bring a deposit of \$100 per person to Dellimore in Bldg. 185. The 7-day, 6-night trip includes round-trip airfare, six nights at Disney's Polynesian Resort, and much more. Costs for adults are: \$868 — 4/room, \$926 — 3/room, \$1,039 — 2/room, \$1,491 — single. When in an adult's room, children 3-9 pay \$542 each, ages 10-17 — \$595 each, age 2 — \$335 for airfare only, under 2 — no fare.

Equipment Demos

Hewlett-Packard will exhibit their oscilloscope and logic-analyzer products on Tuesday, April 13, in Berkner Hall, from 9 a.m. to 2:30 p.m.

Tektronix, Inc., will hold a product show on Wednesday, April 14, from 9 a.m. to 3 p.m., in the Berkner Hall lobby. On display will be digital storage oscilloscopes, logic/spectrum analyzers, transient digitizers, high-speed pulse generators, arbitrary waveform generators, VXI card modular instruments, metallic and optical cable testers, X-terminal graphic displays and high-resolution color printers. All are welcome; coffee & donuts will be provided.

SAG Supply Corporation will display their products on Thursday, April 15, from 10 a.m. to 2:30 p.m., in Berkner Hall, featuring Starrett precision tools, Armstrong hand tools and Kennedy toolboxes. Representatives will be on hand.

Cooking Exchange

The Cooking Exchange will hold its monthly meeting on Wednesday, April 14, at 11:30 a.m., in the Recreation Building.

All are welcome to join in sampling a variety of tasty dishes and to meet new friends. A donation of \$2 per adult is requested, and baby-sitting is provided for \$1 per child. For more information, call Laura Gottlieb, 341-1022.

Attention Parents — Summer Camp List

A comprehensive listing of summer day camps in Suffolk and Nassau Counties has been compiled by Karen Adelwerth of the Personnel Division. For a copy of the list or to borrow literature about a particular camp, call Adelwerth, Ext. 4262. The information is also available at the reception desk in Personnel, Bldg. 185.

Volleyball

Standings as of March 31

Open League		League I	
GTeam	52-20	Network News	52-14
The Roofing Co.	52-20	Rude Dogs	43-20
Farside	30-42	VolleyBallAholics	44-22
Penetrating Veggies	26-46	Upfagrabs	39-24
Me & the Boys	20-52	Underdogs	16-47
		Fornossing	13-50
League II		League III	
Monday Nite Live	53-7	Jolly Veggies	43-17
Safe Sets	44-16	High Volley'em	39-21
Nuts & Bolts	34-26	Upton Ups	35-25
Fossils	29-31	Volley of the Dolls	27-33
Net Wits	26-34	Nutcrackers	28-32
Night Court	25-35	Silver Bullets	28-32
Just Up	16-44	Mis-Fits	21-39
Sourcerers	13-47	Hairballs	17-43

Basketball

Game of April 1

Runaways 69		Magic 53	
J. Gaeta	19	T. Buck	24
W. Cummings	15	D. Hoggard	14
P. Ratzke	8	D. Branch	8
E. Meier	7	J. Garrison	3
R. Wells	6	M. Williams	2
C. Saxen	6	M. Tarrd	2
R. Doty	2		
L. Furenid	2		
G. Shepherd	2		
D. White	2		

3-point shots: D. Branch, J. Gaeta (3), D. Hoggard (2), E. Meier (1).

Bowling

Red/Green League

R. Raynis bowled a 253/618 scratch series, J. Muller 246/201/626 scratch, A. Warkentien 236/218/201/655 scratch, R. Mulderig 230/222/648 scratch, S. DiMaiuta 227, R. Eggert 225, A. Pinelli 225, F. Griswold 224/209/632 scratch, C. Scarlett 222, B. Erickson 216/214/629 scratch, M. Guacci 215/202, K. Asselta 213/210/618 scratch, H. Arnesen 206/200, E. Meier 204, K. Koebel 203, R. Larsen 203, K. Riker 203.

Purple League

Jim Goode bowled a 210/560 scratch series, Jim Biamonte 201. Jim Biamonte converted the 5-8-10 split, Ron Picinich converted the 6-7-10.

White League

Ken Riker had a 228/618 scratch series, Andy Warkentien 224/575 scratch, Ben Belligan 215/206/583 scratch, Phil Radusewicz 212, Ann Wynkoop 201, Jim Meier 200, Diane Lombardi 190, Irene Sperry 189, Maryanne Reynolds 182, Pat Oster 180. Ed Sperry converted the 4-9 split.

Cafeteria Menu

Monday, April 12	
Soup: Navy bean	.80/1.10
Entree: Spaghetti w/marinara sauce	3.35
Lite Choice: Baked BBQ chicken	3.45
Carvery: Hot pastrami sandwich	2.95
Grill: Monte Cristo platter	2.95
Taster's Bar: Wing dings	(oz.) .25
Tuesday, April 13	
Soup: Turkey vegetable	.80/1.10
Entree: Boboli personal pizza	3.50
Lite Choice: Vegetarian stir-fry	3.35
Carvery: Hot roast beef sandwich	2.95
Grill: Herb chicken cutlet w/rice pilaf	3.45
Taster's Bar: Golden-fried vegetables	(oz.) .25
Wednesday, April 14	
Soup: Cream of tomato	.80/1.10
Entree: Baked catch of the day	3.65
Lite Choice: Roast loin of pork	3.65
Carvery: Hot ham sandwich	2.95
Grill: Reuben platter	2.95
Taster's Bar: Chicken nuggets	(oz.) .25
Thursday, April 15	
Soup: French onion	.80/1.10
Entree: Meat loaf w/mushroom gravy	3.65
Lite Choice: Vegetarian stuffed peppers	3.45
Carvery: Hot corned beef sandwich	2.95
Grill: Halibut steak w/basil butter	4.25
Taster's Bar: Fried mozzarella sticks	(oz.) .25
Friday, April 16	
Soup: Seafood bisque	.80/1.10
Entree: Veal Parmesan	3.65
Lite Choice: Baked catch of the day	3.85
Carvery: Hot turkey sandwich	2.95
Grill: Tuna melt platter	2.95
Taster's Bar: Caribbean saltfish fry	(oz.) .25
Movie Night . . . Brookhaven Center	
Wednesday, April 14 . . . 8 p.m.	
Captain Ron . . . free popcorn!	

BROOKHAVEN BULLETIN

Published weekly by the Public Affairs Office for the employees of BROOKHAVEN NATIONAL LABORATORY

ANITA COHEN, Editor
MARSHA BELFORD, Assistant Editor

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(516) 282-2345

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position. Consideration is given to candidates 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, handicap or veteran status.

Each week, the Personnel Division lists new placement notices. The purpose of these listings is, first, to give employees an opportunity to request consideration for themselves through Personnel, and, second, for general recruiting under 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, or call the JOBLINE, Ext. 7744 (282-7744), for a complete listing of all openings.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees.

NS 8170. ENGINEERING POSITION - Requires BS in an appropriate field and approximately three years' experience in health physics, industrial hygiene or safety engineering. Responsibilities include radiation exposure and contamination control, industrial hygiene monitoring, safety engineering, and program audit and oversight. Safety & Environmental Protection Division.

DD 2001. DESIGN POSITION - (term appointment) Requires AAS or equivalent and a minimum 10 years' experience in the design of machinery and mechanical equipment. Full and thorough knowledge of design fundamentals is also required, including: strength of materials, materials application, use of stress/strain formulas, machining and assembly procedures, drawing portrayal, and dimensioning and tolerancing. Extensive computer drawing experience is also required; AutoCAD Release 12 preferred. Physics Department.

DD 0500. TECHNICAL POSITION - (term appointment) Requires AAS in mechanical technology or equivalent experience and demonstrated mechanical fabrication, assembly and machine-shop skills. Experience with large detector systems, especially wire chamber systems, is required. Supervisory experience and computer-based detector testing systems experience are highly desirable. Duties include the preparation of fixtures, test beds and lab space for large wire chamber production. Physics Department.

NS 0498. ENGINEERING POSITIONS (term appointments) - Requires a minimum of a BSME and approximately ten years' experience in the design and fabrication of mechanical or experimental equipment, including stress analysis. The ability to carry designs from inception through drawings, shops and assembly is required. Comprehensive knowledge of design engineering fundamentals and analytical techniques for application in one or more of these specific areas required: vacuum systems, gas handling and storage, structures, pressure vessels, optical systems or lifting/handling equipment. AutoCAD and FEA experience preferred. Physics Department.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

DD 0198. REFRIGERATION AND A/C ENGINEER - Requires substantial experience troubleshooting, repairing, installing and operating commercial/industrial air-conditioning and refrigeration equipment, including steam-absorption, centrifugal and helical-screw refrigeration machines. Successful completion of Refrigeration and A/C apprenticeship program or related course work is highly desirable. Must be able to work shifts as required. Plant Engineering Division.

Motor Vehicles & Supplies

91 CHEVROLET CAVALIER Z24 - sports coupe, 10k mi., blue, a/t, 6-cyl., ac, like new, estate sale. Sharon, Ext. 3995.

90 NISSAN 300ZX - gold pearl, a/t, leather, Bose stereo, clean in & out, T-top, 30k mi., like new, \$15,900. Amy, 924-7552.

90 CAMARO - p/w, p/l, cruise, tilt, am/fm cass., cargo cover, V-6, a/t, ac, low mi., excel. cond. Ext. 4669.

89 PONTIAC LEMANS - p/s, p/b, ac, a/t, alarm, excel., \$5,500; '84 Pontiac Trans Am, p/s, p/b, a/t, good cond., \$1,500 neg. 277-2671 after 6 p.m.

89 PLYMOUTH SUNDANCE RS - all luxury extras, 19k mi., a/t, \$5,775. Eric, Ext. 5875.

89 CADILLAC ELDORADO - silver w/black leather int., fully loaded, 58.4k mi., incl. phone, mint cond., \$12,990. V. Mott, Ext. 7108.

89 EAGLE PREMIER - p/s, p/b, ac, 55k mi., excel. cond., 7-yr./70k mi. warr. David, Ext. 4587.

88 CHEVY CONVERSION VAN - V-8, ac, a/t, am/fm cass., TV, alarm, 66k mi., \$10,000. Bette, Ext. 7795 or 589-8331.

88 CHRYSLER LEBARON - coupe, loaded, 81k mi., excel. cond., \$5,200. Ed, Ext. 7943.

88 HONDA ACCORD LXI - coupe, black, tinted windows, phone, a/t, p/w, mint cond., must sell, \$6,400. Alan, Ext. 2372.

88 DODGE RAM 50 - 7' bed, 30k mi. on truck, red, clean, needs motor, \$1,300. Rob, 727-7404.

87 SUZUKI SAMURAI - black, low mi., loaded, 2 tops, 5-spd., \$3,500; '88 Jeep Wrangler, red, low mi., 5-spd., hardtop, \$6,500. 924-6019.

87 NISSAN STANZA GXE - all power, ac, sunroof, loaded, am/fm cass., good cond., asking \$3,900. Tim, Ext. 5277.

86 JEEP COMMANCHE 4x4 - reg. cab, stereo cass., bedliner, good cond., \$5,000 neg. Mike, 929-4716.

85 SUBARU XT - coupe, 96k mi., am/fm cass., 5-spd., sunroof, light blue, 35 mpg, 588-9325.

85 NISSAN 200SX - silver, 5-spd., 103k hwy. mi., runs well, looks great. Vasilis, Ext. 2830 or 543-0487.

83 YAMAHA VIRAGO MOTORCYCLE - 750cc, gar., extras, mint cond., asking \$1,700. Charles, Ext. 5211 or 321-6674 eves.

83 HONDA ACCORD - for parts or repair, needs CV joint, stereo, engine excel., all glass OK, best offer. Ext. 2831.

83 TOYOTA CELICA GTS - 5-spd., p/s, p/b, p/sunroof, alloy wheels, gar., orig. owner, 140k mi., excel. cond., \$1,800. John, 351-1061.

83 NOMAD TRAILER - 21', fully self-contained, sleeps 6, ac, awning, excel. cond., \$4,500. Bill, Ext. 4140 or 981-6248.

78 HONDA - 1000cc, Gold Wing, 16k mi., excel. cond., \$1,500. Bob, Ext. 7802 or 878-5631.

78 PONTIAC GRAND LEMANS - reliable car, 115k mi., many new parts, a/t, V-8, ac, comfortable ride, clean int., Todd, 286-8624.

77 OLDS DELTA 88 - runs well, reliable, 2 new tires & battery. Frank, Ext. 3531.

75 MG MIDGET - use for parts or restoration, many new parts, sell whole only, best offer. Artie, 931-3468.

66 PORSCHE 911 - coupe, great for restoration, \$8,000 invested, sell/trade for later model car or small truck. Steve, Ext. 7936.

65 MORRIS ENGLISH MINI COOPER S - right side drive, red/black, real pussycat, come see, price ? Wilma, 924-3236.

CLUTCH - '80 Toyota Tercel, 5-spd., \$25 neg. Bob, Ext. 7238.

MANIFOLD - 4bbl intake manifold for Pontiac 326 or 389, new cond., asking \$75. Frank, Ext. 3120 or 727-5096.

MOTOR - '79 Jeep, runs well, will demonstrate, best offer. Dennis, 744-3342.

RIMS - Ford, 5-lugs, 14", \$20/4. Steve, 289-3808.

TIRES - 3 Pirelli, P185/60HR14, good cond., asking \$80. Charles, Ext. 5211.

Boats & Marine Supplies

23' CHRIS CRAFT LANCER - many new items, engine mani., canvas, etc., make offer. Ron, Ext. 5905.

23' 4 WINNS - 1986, 230-h.p. Merc. i/o, excel. cond., many extras, trailer optional, \$9,900. Charlie, Ext. 2407.

22' MARSHALL CATBOAT - freshwater-cooled Yanmar diesel, VHF radio, depth sounder, Danforth compass, head. Gordon, 477-2269.

19' BOAT HULL - fiberglass, needs floor, \$50. 727-4859.

16' O'DAY DAYSAILER SLOOP - fg, requires some work, best price. Jack, 744-8624.

14' HOBIE CAT - roller reefing jib, trailer, \$1,200. Ext. 7657 or 298-9560.

SAILING RIG - by Old Town for canoe, includes sail, mast, leeboards, rudder, etc., \$175; Sunfish, ready to sail, \$300. Bob, 261-3890.

Furnishings & Appliances

ANTIQUE PRINCESS DRESSER - oak, 2 drawers, orig. oval mirror, \$350. Henry, Ext. 5214 or 727-7227.

CABINET - for stereo, Sony, new, teak, 37"x19", \$50. Kathy, Ext. 2223.

COUCH & CHAIR - gold/green, good cond., \$100. Paul, Ext. 727-4859.

DINING ROOM - Nathan Hale dark pine, trestle table, 4 chairs, carriage bench, hutch top, buffet base, \$500. Rich, 475-0373.

FREEZER - Frigidaire, 35"x22"x35", beige, like new, \$175. Bob, Ext. 7802 or 878-5631.

HUMIDIFIER - Bionaire, heating element, suppresses mineral deposits, \$25. Charlie, Ext. 2804.

PORCH FURNITURE - 3 antique rocking chairs, stuffed armchair, excel. cond., \$200/all. 722-3905.

VANITY - wood w/glass top, trifold mirror. Sharon, Ext. 3995.

WASHER & DRYER - portable, Sears, stackable, 2 yrs. old, white, \$400/pair. Mauro, 265-6542.

WATER BED - queen size; many collectibles. Kathy, 929-8443.

Tools, House & Garden

CARPENTER PLANES - other tools, antique & modern. Jack, 744-8624.

EXTENSION LADDER - 20', alum., \$100. 722-3905.

MAPLE TREES - Japanese red, \$10-\$45+; Sears riding tractor, 12-h.p., 4' deck, snow blower, battery start, tow trailer. Mauro, 265-6542.

STORM/SCREEN DOOR - full-view, white, excel., \$25. 281-7844 eves.

Sports, Hobbies & Pets

BATTING GLOVE - adult, left hand, for right-handed batter, large, leather, new, won in contest, \$5. Ext. 2733 or 878-8491.

BORDER COLLIE MIX - female, needs a family, loves children, 2 yrs. old, all shots, neutered. Ron, Ext. 2525 or 286-0353 after 6 p.m.

MOUNTAIN BIKE - Trek 7000, three yrs. old, bar ends, frame pump, excel. cond., \$350. 473-3151.

PIANO - c. 1945, Knabe, console, upright, recently tuned, good cond., \$450. Ballard, Ext. 4751/5504.

ROWING MACHINE - D.P., \$25; Signature upright freezer, 32"x71", \$75; Singer sewing machine, zig-zag, cabinet, \$75. 281-7935 eves.

SKI MACHINE - Easy Glider, cross country, orig. \$80, asking \$20. Mary Smith, 473-5568.

SOFTBALL GLOVE - left-handed, Louisville, excel. first-base mitt, \$25. Joe, Ext. 2384.

TELESCOPE - w/tripod, 2.4" refractor, 60mm, F12, needs eyepiece. Sharon, Ext. 3995.

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TELESCOPE - Jason, 460X, 800mm, focal length, 60mm, objective lens, all accessories, like new, \$125. Tim, 474-2780.

Audio, Video & Computers

COMPUTER - Commodore 65, w/printer, lots of games, throttles, access., \$250. Joe, Ext. 2384.

COMPUTER - Mac Plus, 4MB RAM, 20MB HD, keyboard, software, \$500; plotter, HP, color, plain paper, brand-new, \$500. Ext. 7699 or 821-1435.

COMPUTER - Packard-Bell AT-compatible 286, 1024K RAM, 40 Meg HD, color VGA mon., mouse, game port, software, \$1,100. John, Ext. 7982.

LINE CONDITIONER - for computers, 1200 watt, Tripp-lite, like new, orig. \$250, sell for \$125. John, Ext. 2460 or 281-2471.

NINTENDO SYSTEM - \$45; power gloves, \$30; max controller, \$20; \$85/all; games, \$15/ea.; three for \$40. Ext. 7505.

POWER AMP - Hafler P-500 commercial, w/rack & EQ, excel. cond., \$600 or trade for dirt bike. Artie, 981-3468.

VIDEO CASSETTE PLAYER RECORDER - no TV channels, w/remote, RCA, \$50; computer interface. Xetec Jr., \$20. Ext. 5080 or 751-1884.

VHS OMNI MOVIE - Panasonic, new, never used, new case. Charles, Ext. 4669.

TELEPHONE - AT&T, portable, model 4200, \$25. Frank, Ext. 3120 or 727-5096.

Miscellaneous

BOOKS - complete Time-Life Series, \$2/volume, many paperbacks, 50¢/ea. Charlie, Ext. 2804.

ENGAGEMENT RING - diamond, 14k gold, \$550 or best offer. Shawn, Ext. 5740.

MET OPERA TICKETS - Lucia, Sat., 4/24, matinee, rear orchestra, \$60/ea. or \$110/two. Joyce, 289-5770 after 6 p.m.

TICKETS - 2, BERA-sponsored bus trip, Miss Saigon, Sat., 4/17, matinee, dinner and transp., \$119/ea. Adams, Ext. 5221.

Free

BOOKS - Proceedings IRE and IEEE, bound, 1944-69, Trans. MTT 1988-present, J. Lightwave Technol., 1991-present. Jack, 744-8624.

FLOOR WAXER - needs new wire; window. Janet, Ext. 2345 or 929-3910.

KITCHEN - cabinets 14 1/2' long w/refrigerator, wall oven and cooktop (propane), everything works, you pick up. 543-9508.

PIANO - baby grand, suitable for student. Dick, Ext. 3752 or 744-9699.

RABBIT HUTCH - large 3-case, 4'x12'. John, Ext. 3302 or 924-0651.

Lost & Found

LOST - several model rocket parts, in vicinity of playing fields. Ext. 2686 or 821-7179.

Car Pools

BOHEMIA-E. ISLIP-OAKDALE-SAYVILLE - need 1 more driver. Frank, Ext. 2314.

Real Estate

Real Estate advertised for sale or rent is available without regard for the race, color, creed, sex or national origin of the applicant.

For Rent

BROOKHAVEN HAMLET - historic 2-bdrm. Eng. cottage, hand-hewn beams, wide-planked floors, d/r w/lp, greenhouse off kit., 2 baths, \$1,100/mo. + util & sec. Susan, Ext. 2888 or 286-0422.

CENTEREACH - 4-bdrm. w/w, cable, nonsmoker preferred, \$675/all, single person, \$775/all, working couple. Tony, Ext. 7623.

E. MORICHES - 2-bdrm. apt., 2nd floor of Victorian house, bath, kit., l/r, 3 blocks to bay, shops, school, \$635/mo. + util. Mona, Ext. 5056 or 878-9384 eves.

HAUPPAUGE/CENT. ISLIP - Windbrooke condo, 2-bdrm. ranch, off LIE Exit 56, 30 min. to Lab, all appl., cac, w/w, pool, move-in, \$900/mo. Vita, 277-0464, or Frank, Ext. 7519.

ISLIP - 3-rm. apt., large rooms, very sunny, south of Montauk, nonsmoker, no pets, \$800/all + cable. Evelyn, 277-7224.

MASTIC PARK - 1-bdrm. apt., full kit., ex-large bath, heat, city water, cable, good loc., sec., refs., \$625/mo. 281-7844 eves.

MIDDLE ISLAND - furn. 2-bdrm. condo. 1 1/2 bath, cac, all appl., 5 min. to Lab, clubhouse, \$875/mo. + util. 751-8351.

MILLER PLACE - 1-bdrm. apt., paneled kit., l/r, full bath, w/w, priv. ent., quiet neighborhood, \$560/mo. includes all. 928-0093 after 4 p.m.

PORT JEFFERSON STATION - 1-bdrm., l/r, d/r, kit., full bath, driveway, pvt. ent., p/furn., \$575/mo. + sec. 473-4827 after 5:30 or weekends.

RIDGE - large 1-bdrm. apt. w/priv. ent., w/w, 5 min. to Lab, suitable for 1 person/couple, no children, no pets, avail. immediately, \$650/all, sec. Ext. 5076 or 744-4615.

ROCKY POINT - new, spacious, 1-bdrm. downstairs apt., l/r, eik, 10 min. from Lab, w/w, priv. ent., quiet neighborhood, free cable. Khalid, Ext. 3800 or 744-5895 after 6 p.m.

SELDEN/CORAM - 1-bdrm. apt., l/r, d/r, eik, a/c, gas heat, pool, 15 min. to Lab, new paint, rugs, blinds, 1-yr. lease \$725/mo., 2-yr. lease \$700/mo. Frank, 698-5046 day or eve.

SELDEN - studio apt., kit., bath, in quiet residential area, priv. ent., w/w, \$525/mo. incl. util. & cable., 1 mo. sec. 689-1539.

SELDEN - brand-new, lg. 1-bdrm. apt., full bath, eik, l/r, priv. ent., quiet street, \$600/all. 732-9101.

SHIRLEY - share house, own bdrm. & l/r, \$350/single, \$450/couple, includes all, 15 min. to Lab. Rob, 395-4521.

SHIRLEY - 3 bdrm., l/r, d/r, kit., full bath, w/w, fenced yard, 1 mi. Smith Point, 8 mi. BNL, \$825/mo. + util. 744-5448 after 5 p.m.

ORLANDO, FL - 1-bdrm. apt., fully equipped, 5 min. to Disney World, now to 7/24, 1 week (Fri.-Fri.), you pick date, \$600/wk. Ext. 2683 or 751-2469.

SHAWNEE, PA - timeshare, 5/23-30, Memorial Day weekend, sleeps 6-8, 2-shower Jacuzzi, in/outdoor activities, ask. \$400/wk. Charles, Ext. 5211 or 321-6674 eves.

HILTON HEAD, SC - 2-bdrm. condo, sleeps 6, fully furn., 2 baths, pool, beach, golf nearby, April-Sept., \$450/week for BNL employees & family members. Guy, Ext. 3147 or 689-5378.

For Sale

BELLPORT VILLAGE - secluded home on 2/3 acre, steps to golf, tennis, French doors, deck & skylights, outdoor Jacuzzi, south of S. Country Rd., \$248,000. Ext. 2888 or 286-0422 after 6 p.m.

CALVERTON - 2-bdrm. townhouse, 5 appl., carpeted, cac, fp, patio, upper deck. Ext. 3558.

CENTEREACH - 3-bdrm. split-level, 1 1/2 baths, l/r, d/r, eik, den, laundry, bsmt., gar., patio, shed, new OHWH. Marilyn, Ext. 5075 or 585-1863.

CENTEREACH - 4-bdrm. Cape, 2 full baths, 2-zone new oil heating unit, Florida rm., eik, l/r, gar., full bsmt., 80'x100', fenced property, walk to stores, \$115,000. 981-0551.

E. MORICHES - 1/2-acre, tree, corner bldg. lot, city water & gas, avail., 1 block to village, \$60,000. Mike, Ext. 4028 or 878-2571, leave message.

E. SETAUKET - 4-bdrm. split-level, 2 1/2 baths, 3VSD, rear deck, igp/igs, beautifully landscaped, \$184,900. 473-5376.

HOLBROOK - 6-bdrm. mother/daughter, 2 baths, 2 eik, d/r, l/r, carpet, deck, fenced-in, 10'x12' shed, walk to stores, 737-4082.

MANORVILLE - 3-4 bdrm. Colonial, master suite, whirlpool, fd/r, oak kit., bsmt., gar., fp, igs/igp, sat. system, 1-acre landscaped, safe family neighborhood, \$176,000. 878-9239.

MANORVILLE - approx. 26 acres, excel. neighborhood, \$240,000, terms, owner. (301) 729-6433.

MIDDLE ISLAND - Lake Pointe at Artist Lake, upper 1-bdrm. co-op, deck, cac, w/d, clubhouse, etc., assum. mortgage, \$59,000, neg. Bill, Ext. 2350 or 924-1346.

MILLER PLACE - 2-3 bdrm. Cape, full dormer, RPSD, full bsmt., 0.27 acre, fenced, priv. deck, fp w/wood stove, 4-zoned OHWH, 1 1/2-car. heated, det. gar., appl., \$113,000. 744-4386.

MT. SINAI - N 25A, 4-bdrm. Col., 1 1/2 baths, den, brick fp, d/r, entry hall, l/r, bsmt., gar., green-house, deck, 2,000 sq. ft., Weil-McLean furnace, new windows, drive. R. Cohen, 473-8717.

N. SHIRLEY - settle estate, older 3-bdrm. ranch, 1 1/2 baths, new vinyl siding w/insul., OHWH, new cesspools, 50'x218', WFSO, low tax, \$69,900 w/lp or wood stove. Joe, Ext. 4786 or 281-7683.

RIDGE - 4-bdrm. cape, large corner prop., res. neighborhood, move-in cond., but needs work, \$79,999. 744-4611 after 6 p.m.

RIVERHEAD - adult Glenwood Village, holiday cottage mobile home, 12'x70' oil heat, cac, all appl., 26' Fla. rm., \$17,000 neg. 727-1588.

RIVERHEAD - 12'x65' 2-bdrm. mobile home, totally renovated, 8'x10' shed, cooperative park, \$25,000 neg. Beth, Ext. 4986 or 369-4295.

SHOREHAM - 3-bdrm. ranch, eik, den, l/r, fp, full bsmt., gas heat, 0.37 acre, fenced yard, perennial garden, LWSO, \$109,900. Terry, 744-4912.

SOUND BEACH - MPSD, 3-bdrm. ranch, 2 baths, eik, d/r, rec. rm., cac, 2-car gar., 0.32 acre, landscaped for birds, 18 min. from Lab, \$136,500. Mara, 821-0469.

SOUTHAVEN - 3-bdrm. custom home, 2 baths, cathedral ceilings, fieldstone fp & kit. built-in BBQ, laundry rm., 2-car gar., fenced, \$115,000 neg. Keith, 924-5062.

WADING RIVER - 3-bdrm. ranch, priv. beach community, eik, fd/r, ac, trees, bsmt., deck, lg. shed, 1 1/2 baths, cyclone fence, 1/2 acre, low taxes, \$124,900. Saxon, 744-3842.

WADING RIVER - SWRSO, 3-bdrm. country ranch, 2 baths, d/r, den, fp/woodstove, eik, bsmt., walk to LI Sound, \$169,000.