BROOKHAVEN BULLETIN
Vol. 36 - No. 35 September 3, 1982
BROOKHAVEN NATIONAL LABORATORY

Models For Industry

Though they may seem different, the most elegant stationery and the sturdiest cardboard box share a common origin. Both are products of the pulp and paper industry.

In 1977 alone, the United States pulp and paper industry produced more than 61 million tons of paper and paperboard in the 725 operating mills of 405 companies. And in doing so, the industry consumed an enormous amount of energy. In 1979, for example, it ranked fifth among all U.S. industries,purchasing about a quadrillion BTU's of energy.

It is easy to look back the 70's and analyze the industry's energy flow because all the data are a matter of record. But think how useful it would be to be able to do the same thing for the future, now. That's exactly what policy analyst Barbara Pierce (Dept. of Energy and Environment) recently tried to do for the Bonneville Power Administration (BPA) of the Pacific Northwest, using a process model of the U.S. pulp and paper industry developed by the Energy and Economic Analysis Division of DEE's National Center for Analysis of Energy Systems (NCAES).

Mort Rosen

Barbara Pierce

For the BPA project, Charles Balzer and Joan Congemi handled data processing.

Funded by the Department of Energy, the Energy Information Administration and the Electric Power Research Institute (EPRI), NCAES has so far developed models of three major U.S. industries — pulp and paper, aluminum, and iron and steel — all large energy users.

First, these computerized models are fed data projecting the demand for an industry's manufactured goods and outlining a scenario for basic raw materials and energy prices. Then, they select those processes and production levels that will minimize the cost of meeting the project demands. Energy, its selection, production and use, is a prime consideration. As Pierce summarized, "These models can be very helpful for assessing the impact of new technologies, answering questions about an industry's energy policy, evaluating government's energy policies, or projecting energy demand and indicating the kinds of generating capacity a plant will need in the future."

It is this last application that interested BPA which wanted to produce a 20-year forecast of electric demand in their region. Their first approach was to use an econometric model — one that applies statistical methods to study economic data and problems. But that model showed that the pulp and paper industry's demand for electricity would decline over the next twenty years and BPA felt these results were unrealistic. In 1977, this industry consumed 39.5% of the fuel and 19% of the electricity used in the Pacific Northwest, making it one of BPA's largest customers. So it was critical to BPA's forecast that the analysis of the pulp and paper industry be more than a statistical extrapolation of the past.

NCAES' model seemed to offer another approach. Unlike the econometric model, these linear programming models do not assume that a trend will necessarily continue. In the NCAES models, Pierce said, "The demand for the product is really the driving force, and those data are supplied externally. The models also respond strongly to fuel prices and provide for an analysis of a range of possibilities."

For this, its first real-life application, the pulp and paper model required some modification. The original model covered the entire U.S. industry, but the BPA project called for a single-region version. The base-year of the 20-year forecast was originally 1975 and that was updated to 1980. And an extensive modification allowed both the purchase and sale of electricity, as required by the Public Utility Regulatory Policy Act, under which the BPA operates.

The first run of the model established a base case for the 20-year period, reflecting the simplest scenario. During each subsequent run, some aspect of the scenario was varied. Several runs incorporated relatively simple, low-cost internal measures that the pulp and paper industry could undertake to conserve energy, while others allowed investments in new technologies, such as cogeneration. Other scenarios tested possible effects of new tax policies, while still others examined whether there was a tradeoff between production costs and purchased electricity.

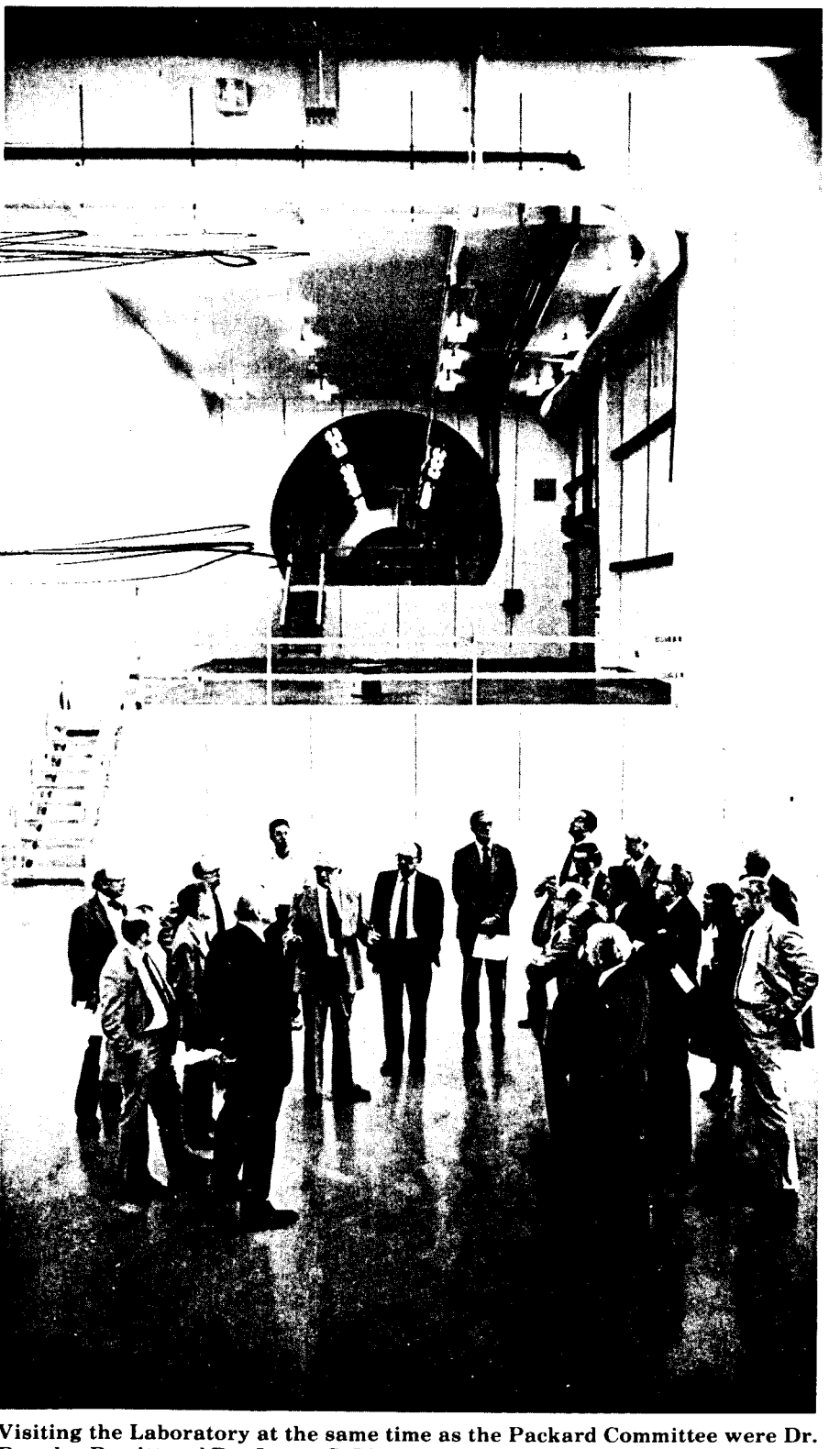
Initial results in hand, Pierce met with pulp and paper industry representatives in Portland, Oregon. "That was an educational experience," she said. "Industry people traditionally don't like their industry to be analyzed — by anyone but themselves. They didn't feel our data were very good, so they helped provide much better data. That was superb and helped everyone."

After incorporating the industry-provided data, Pierce presented her analysis to BPA. Among many other things, results showed that the pulp and paper industry's demand for electricity would grow at a rate of 1.7% per year in the base-case, and from 2.2% to 1.2% per year in other scenarios. "The results fit in very nicely with the growth rate for the region and have given Bonneville numbers that they have confidence in," said Pierce.

With one customer satisfied, Pierce is eager to make the models work for others. She has spent the summer updating all three models, in terms of base-year capacities, demands for products, costs and new technologies. This will be completed by late fall, when Pierce will introduce the models to the utility industry at two regional workshops sponsored by EPRI. There, she will show utility analysts how these models can help them forecast their future generating requirements.

—Anita Cohen

The Federal Laboratory Review Panel of the White House Science Council, chaired by Mr. David Packard (left) visited the Laboratory on August 30 for an overview of BNL's research and a tour of the major facilities. At the National Synchrotron Light Source (NSLS), Mr. Packard (Hewlett-Packard Company), and panel member, Dr. Donald S. Fredrickson (National Academy of Sciences), listen to NSLS Division head, John McTague explain a point. At right is AUI president, Robert Hughes. Other members of the Review Panel present at BNL were Dr. John Bardeen (Univ. of Illinois), Professor Arthur K. Kerman, (M.I.T.), Dr. Edward Teller (Lawrence Livermore Laboratory) and Dr. Albert D. Wheelon, Hughes Aircraft Co.



Visiting the Laboratory at the same time as the Packard Committee were Dr. Douglas Pewitt and Dr. James G. Ling of the Office of Scientific and Technical Policy, together with members of the President's Private Sector Survey — Dr. Jack Drysdale, Dr. Monroe Sadler and Mr. Roger Milliken. Above, all the visitors are briefed on ISABELLE at the Wide Angle Hall.

—Photos by Humphrey

How's Your LIQ?

The following excerpts are from a test devised by Mary-Beth Corwin as a requirement for a graduate course, "Tests and Measurement," at the C.W. Post Center of Long Island University. Portions of this test are reprinted from The Suffolk Historian.

1. *How many horse-racing tracks are there on Long Island?*
   A. Two
   B. One
   C. Four
   D. Three
2. *The largest lake on Long Island is:*
   A. Hempstead Lake
   B. Lake Ronkonkoma
   C. Belmont Lake
   D. Lake Panamoka
3. *The Island's largest airport is:*
   A. Republic
   B. Long Island MacArthur
   C. Kennedy International
   D. Zahn's
4. *Long Island measures approximately how many miles in length?*
   A. 72
   B. 118
   C. 46
   D. 159
5. *Which town is the county seat of Suffolk County?*
   A. Centereach
   B. Patchogue
   C. Riverhead
   D. Greenport
6. *The highest spot on Long Island is in which of the following towns?*
   A. Huntington
   B. Brentwood
   C. Glen Cove
   D. Northport
7. *Which tribe of Indian still has a reservation on Long Island?*
   A. Algonquins
   B. Matinecocks
   C. Nissequoques
   D. Shinnecocks
8. *Settlement of Long Island began after the exploration in 1609 by:*
   A. John Cabot
   B. Henry Hudson
   C. Giovanni da Verrazano
   D. Christopher Columbus
9. *A famous flier who is associated with Long Island is:*
   A. Glenn Curtiss
   B. Howard Hughes
   C. Orville Wright
   D. Charles A. Lindbergh
10. *How many ducks are raised on Long Island?*
   A. Two out of every four in the U.S.
   B. One out of every five in the U.S.
   C. One out of every four in the U.S.
   D. Three out of every five in the U.S.
11. *A state-maintained fish hatchery is at:*
   A. Cold Spring Harbor
   B. Mattituck
   C. Bayville
   D. Northport
12. *An important center for whaling in the early days of Long Island was:*
   A. Westhampton
   B. Sag Harbor
   C. Center Moriches
   D. Southold
13. *One important shipbuilding center of long ago was:*
   A. Smithtown
   B. Port Jefferson
   C. Setauket
   D. Rocky Point
14. *A famous poet who was born on Long Island was:*
   A. Benjamin Thompson
   B. William Cullen Bryant
   C. Christopher Morley
   D. Walt Whitman
15. *Which President built a home on Long Island and called it Sagamore Hill?*
   A. Theodore Roosevelt
   B. Richard M. Nixon
   C. Dwight D. Eisenhower
   D. Lyndon B. Johnson

Answers: 1,D; 2,B; 3,B; 4,B; 5,C; 6,A; 7,D; 8,B; 9,D; 10,B; 11,A; 12,B; 13,B; 14,D; 15,A.

On Tour

The Brookhaven House will be open to the public Sunday, September 12, as the feature attraction on the Sunday tour. It is the last time this season that the house will be open for public viewing. An award-winning film called "Building the Brookhaven House" will also be shown and a BNL researcher will be on hand to answer technical questions. Visitors may also stop at the Exhibit Center where numerous displays describe the Lab's research. Tour hours are from 10 a.m. to 3 p.m. Regular Sunday tours will continue through the end of September, but will not be given this Sunday, September 3, because of the holiday weekend.

At Work On Labor Day

The idea for celebrating Labor Day was introduced 100 years ago, on the first Monday in September, 1882. That's when the Knights of Labor, an American labor organization started by Philadelphia tailors in 1869, first paraded in New York City to urge that a day be set aside to honor the workingman. Their persistence began to pay off in 1887 when Colorado, followed by New York, New Jersey and Massachusetts, passed a law recognizing Labor Day. In 1887, Congress passed a bill making the day a legal holiday throughout the land.

And so, throughout the land this coming Monday, most people will celebrate Labor Day as a day free from their ordinary labors. But for others, Monday will be just another workday.

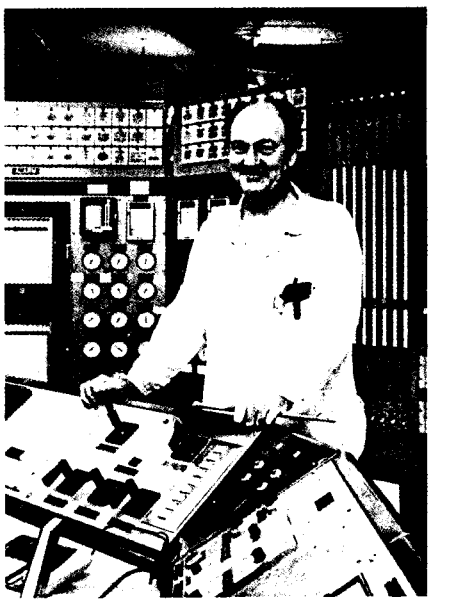
Why will some people labor on Labor Day? At BNL there are several reasons:

- BNL Firefighters and Police will be on site to make sure there is no lapse in essential services. A full contingent from both departments will be here to assure the Lab's safety and security.
- At the Applied Math Department, operators will be on duty to keep the Lab's computers available to the user community.
- Though someone is always on duty at the High Flux Beam Reactor, this will be a special weekend for personnel there. After boosting its power from 40 megawatts (MW) to 50 MW earlier this week, the HFBR is scheduled to be raised to 60 MW today. During this first weekend, HFBR operations personnel will carefully monitor the new operating conditions.
- To operate and maintain air conditioning and refrigeration equipment and the Central Steam Plant, Plant Engineering personnel will also be here on Monday.
- Since hospitals take no holidays, a medical staff will be on duty throughout the weekend at the Research Hospital. And since Medical's animal quarters will require their usual feeding and clean up on Monday, a full veterinary crew will also report to work.
- A custodial staff will be busy in the apartment area readying quarters for new arrivals and for upcoming conferences. In the Housing Office, housing assistants will complete the paperwork for the new arrivals.

In other areas where people will be working on Monday, it's a safe bet that, like the jobs mentioned above, theirs is a critical one — one that cannot take time for a holiday.

On Monday, registered nurse Joyce Vail will be on duty in Medical.

Air conditioning and refrigeration engineer William Barthold will be helping Plant Engineering on Labor Day.



At the HFBR will be reactor operator Ralph Jackson.

—photos by Humphrey

Tokyo Quartet In Concert

The Tokyo String Quartet will perform at Berkner Hall on Thursday, September 16, at 8:30 p.m.

This concert marks the group's third appearance at BNL. The ensemble has a new first violinist, Peter Oundjian, who began performing with the group last year. Of this new combination, the critics write that the musicians "are as well matched as the Amati instruments they play."

The program for the September 16 concert will include Haydn's G Major Quartet, Opus 77, No. 1; Berg's Quartet, Opus 3; and Beethoven's C Major Quartet, Opus 59, No. 3.

Tickets will be available at the door before the performance. Individual concerts are priced at $7 for adults, $4 for students and senior citizens, and $3 for those under 18.

Thrifty music lovers would do well to buy block tickets, good at any concert, at $5 a ticket for a bulk purchase of five or more tickets. Block tickets can be purchased at the door on the night of the concert. Please note that for every four block tickets purchased, only one of the four can be used for the Tokyo concert.

Poly Registration

Registration for the following Polytechnic Institute courses will be held on Wednesday, Sept. 8 from 6-7 p.m. in the Conference Room, Bldg. 318 (across from bank). Tuition is $220 per unit.

The courses are: NU 601 Intro. Nucl. Engr. I, NU 606 Radiation Prot., NU 703 Nucl. Reactor Theory III, NU 705 Advanced Nucl. Engr. Lab. I. Days, times and instructors will be announced later. All classes will begin at 6 p.m. unless otherwise announced.

Further information regarding courses can be obtained by calling Raphael Aronson at (212)-643-8184.

BROOKHAVEN BULLETIN

Published weekly
for the employees of
BROOKHAVEN NATIONAL LABORATORY

BERNICE PETERSEN, Editor
MONA S. ROWE, Assistant Editor
ANITA COHEN, Reporter

35 BROOKHAVEN AVE., UPTON, N.Y. 11973
Telephone (516)282-2345

NYC Train Trip

The Hospitality Committee is planning a group railroad trip to New York City on Wednesday, September 15. Departure will be at 7:55 a.m. from the Patchogue LIRR station. Round-trip fare for adults is $3.50; 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 Friday, September 10. Please make checks payable to "Brookhaven National Laboratory," and put the date of the trip, your BNL life number and your telephone number on the check. Your tickets will be given to you on the train. Refunds will be made only if cancellations are received by the Monday morning preceding the trip.

Arrivals & Departures

Arrivals

Harriet Z. Fadem ..... Tech. Info.
Deborah L. Halkins..... Plant Engrg.

Departures

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

Victor A. Ashford ..... Physics
Robert A. Boie ..... Instrumentation
Robijn F. Bruinsma ..... Physics
Margaret Chin Sun Chong..... Nuc. Engy.
Parichehre Davanloo-Malherbe ..... Biology
Jodine C. Dugas ..... Energy & Env.
Grace M. Fales ..... Supply & Materiel
James A. Gray III..... Mgt. Info. Sys.
Prasad Koka ..... Biology
Frederick H. Kuhn..... Accelerator
Alan R. Newman..... Energy & Env.
S. Sethu Raman ..... Energy & Env.
Robert K. Schoen ..... Energy & Env.
Timothy J. Sills ..... Energy & Env.
Eric C. Svensson ..... Physics
Cheryl B. Van Tuyle ..... Medical
Fred Vaslow ..... Nuclear Energy
George A. Weber ... Mgt. Info. Systems

Cast Call

Take your act to the Brookhaven Center on September 8 and try out for the 5th Annual BERA Vaudeville Show. Auditions begin at 7:30 p.m. in the north room, and a piano accompanist will be available. All kinds of acts are welcome. For more information call Jane Love at 286-1136, or Penny Baggett on Ext. 5154.

Drivers Note

If you rent cars for official or personal use and don't recognize this card, you are missing out. Check with the Travel Office for more information.

BROOKHAVEN NATIONAL LABORATORY

A/A 298900

EUROPE AFR-ME	ASIA PACIFIC	LATN AM CARIB	CANADA	U.S. WIZARD
20	20	20	*	AS PER AID #

AVIS

Learn English

English for the Foreign Born, a course designed for those with little or no knowledge of the English language, will be offered at the Middle Island Junior High School. Classes will be held from 8 p.m. to 9:30 p.m. on Thursdays for ten weeks beginning September 23. The school is located on Middle Island-Yaphank Road in Middle Island.

Registration will be held from 7 p.m. to 9 p.m. on Monday, September 13 at the school. The fee for the course is $18.00 and students will be required to purchase a book.

For any further information, call Peter Strafaci, Director of Community Affairs at 345-2163 between 8 a.m. and 2:30 p.m.

Cricket

On Saturday, August 21, the Brookhaven International Cricket Club hosted Staten Island Cricket Club in the third match of the 1982 season. The visitors chose to bat first, reaching a total of 166 in their allotted 35 overs. John Millener (3 wickets for 31 runs), Gnanalingam Anandalingam (3-37) and Clem Auguste (2-16) were the most successful Brookhaven bowlers. Faced with this rather formidable total, the Lab team made a promising start, reaching 90 with only 4 wickets down, but from then on could only amass a total of 117. Clem Auguste (43) and John Millener (23 not out) were the highest scorers for Brookhaven.

The final match of the year will be at home against the British Veterans Cricket Club from Oyster Bay on Sunday, September 19, 2 p.m.

WIS Meeting

The regular monthly meeting of WIS will be held in Berkner Hall on Thursday, September 16 at noon in Room D. The agenda will include the election of officers for the year 1982-83 and a discussion of future programs. All interested persons are invited to attend.

Golf

The next BGA tournament will be held on Monday, September 20 at the West Sayville Suffolk County Golf Course. This tournament will be run as a 4 man team scramble. Entries will be on an individual basis **only.** Teams will be made up by the tournament committee so that the total team handicaps will be as nearly equal as possible. There will be a $1 entry fee for BGA members and a $2 entry fee for non-members. The deadline for entering is at **noon** on Monday, September 13. All entry fees **must** be paid when signing up. Entry fees should be sent to John Usher, Bldg. 820 (Ext. 2096). Individuals entering the tournament who do not have a BGA handicap should indicate their average 9-hole score. Everyone should plan to tee off at 11:30 a.m., as it may not be possible to honor late tee-off time requests.

Bowling

Bowling will begin on Tuesday, September 14 for the Port Jefferson leagues and Thursday, September 16 for the Shirley leagues.

Bowlers are still needed for the Port Jefferson men's league on Tuesday evenings. If you are interested, please contact Charlie Bohnenblusch, Ext. 4758 or John Connelly, Ext. 3284.

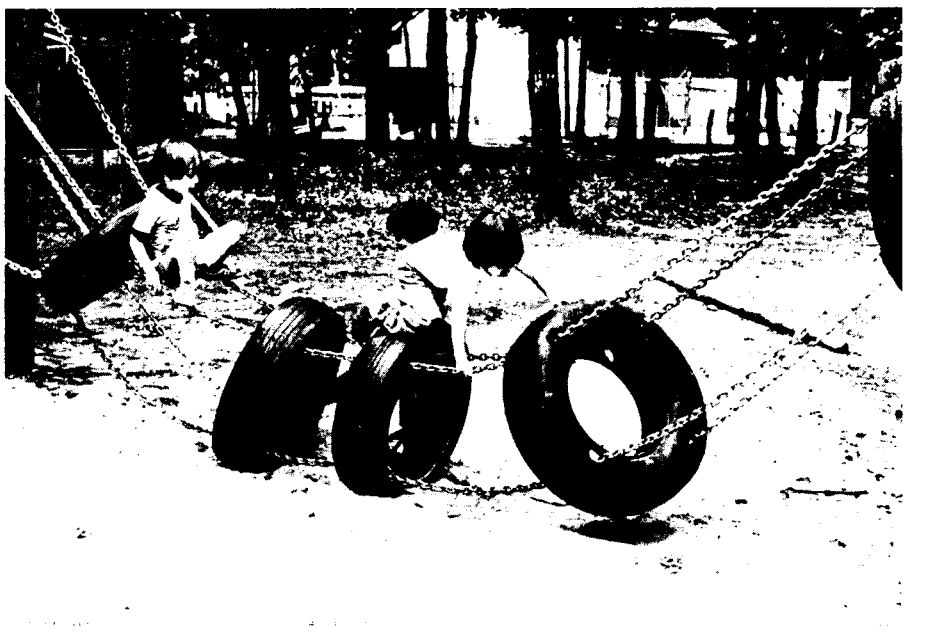
Nursery School Begins Sept. 13

Outings to a farm at the Shoreham/Wading River Middle School and the exercise trail at the high school, feeding the ducks at South Haven Park, a visit to the BNL Mail Room, a demonstration by the BNL Firefighters; these are some of the special activities children at the Upton Nursery School enjoy throughout the year.

The Nursery School begins its fall term on September 13, and a few openings are still available. Classes are for three and four-year olds, two or three mornings a week.

Regular activities at the school include art and nature projects, individual and group play, singing, cooking and story telling. All classes are conducted by certified teachers, assisted by parents.

Tuition is $32 a month for a two-day-a-week schedule and $46 a month for three days a week. For applications, call the co-presidents, Donna and Robert Miltenberger, at 924-0590; or the enrollment chairperson, Dorey Panno, at 924-5495. Applications can also be picked up at the Cafeteria on September 9, during lunch time.



Food Service

At the Cafeteria the snack bar will be open from 9 a.m. to 2 p.m. daily on Saturday, Sunday and Monday, September 4, 5 and 6.

The Tap Room at the Brookhaven Center Club will be closed on Saturday and Sunday, reopening at 5 p.m. on Monday, September 6.

The Vended Food Service in Building 912 will be in operation throughout the Labor Day weekend.

Cafeteria Menu

Week Ending September 10, 1982

Monday, September 6		
Snack bar service, 9 a.m. to 2 p.m.		
Tuesday, September 7		
Beef barley soup	(cup)	.65
	(bowl)	.75
Western omelet & 1 veg.		1.80
Beef chow mein on white rice		1.85
Hot Deli — Corned beef on rye		1.85
Wednesday, September 8		
Turkey noodle soup	(cup)	.65
	(bowl)	.75
Sauerbraten & potato pancake		1.95
Stuffed cabbage & 1 veg.		1.85
Hot Deli — Baked ham	(bread)	1.85
	(roll)	1.95
Thursday, September 9		
Pork & cabbage soup	(cup)	.65
	(bowl)	.75
Beef Stroganoff on egg noodles		1.95
Baked lasagna & 1 veg. w/garlic bread		1.90
Hot Deli — Sandwich steak w/peppers & onions	(bread)	1.90
	(roll)	2.00
Friday, September 10		
Clam & celery bisque	(cup)	.65
	(bowl)	.75
Southern fried chicken & 1 veg.		1.85
Macaroni & cheese & 1 veg.		1.80
Hot Deli — Sausage & pepper hero		1.95

Softball

Leagues I and II

Blue Jays 8 — Ice Pops 7

Game was tied 4-4 for seven innings. In the eighth the Ice Pops got three runs and the Blue Jays came back with four to win. Hank Arnesen's single brought in the tieing run in the seventh, and his hit in the eighth brought in the winning run. Lou Nieves started the winning rally with a two run homer.

Ravens 11 — Roga 3

Herbie Harris and Walt Mason had home runs for the Ravens.

Six Pax 15 — Moles 9

For the Six Pax, John Usher was 3 to 3. Walt Reams and Craig Erick each had a home run.

Phoubars 18 — Big Sticks 17

For the Phoubars, Gordon Smith had a home run. P. Messineo was 4 for 4. Jack Brennan, Ken Kowalski and Dave Jansen were 3 for 4. The Big Sticks had a big 5th inning with a two run homer by Mikey Bannon. Joe Kutschera was 5 for 5.

Leagues III and IV

Dirty Sox 7 — Medical 5
Magnuts 26 — Random Errors 5

Tommy Dilgen had a home run.

Titans 11 — Lights Out 10
Electric Co. 9 — AMD 5

League V

TNT 19 — Turkeys 12
E-Z Riders 9 — Survivors 5
No Names (won) — Nads (lost)

League VI

Who Cares vs. Mudville Sluggers
Rained out.
Random Sample 14 — Who's On First 10
The Source 31 — Underalls 8
Mole-Esters 10— No Feedback 1

Mountain Club

The club is planning a canoeing trip on the Delaware River, Sept. 11-12. All are invited. Call Pat on Ext. 7635 for more information.

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position, with consideration given to candidates in the following order of priority: (1) present employees within the department, with preference to those within the immediate work group; (2) present employees within the Laboratory as a whole; and (3) outside applicants. In keeping with the Affirmative Action plan, selection decisions are made without regard to age, race, color, religion, national origin, sex, handicap or veteran status.

Each week, the Personnel Office lists new personnel placement requisitions. The purpose of these listings is, first, to provide open placement information on all non-scientific staff positions; second, to give employees an opportunity to request consideration for themselves through Personnel; and, finally, for general recruiting purposes. Because of the priority preference policy stated above, each listing does not necessarily represent an opportunity for all candidates. As a guide to readers, the listings are grouped according to the anticipated area of recruitment.

Except when operational needs require otherwise, positions will remain open for one week following publication date.

For further information regarding a placement listing, contact the Personnel Placement Supervisor, Ext. 2882.

The vacancies listed below have been exempted by the Director's Office from the current freeze on open requisitions.

OPEN RECRUITMENT: Opportunities for present Laboratory employees and outside applicants.

1745. TECHNICAL POSITION - Requires bachelor's degree in technical area or equivalent experience and an extensive background in digital and analog circuitry, high voltage systems, NIM and CAMAC modules as well as experience in the design, repair and modification of state-of-the-art laboratory equipment. Familiarity with related digital firmware and software desirable. Chemistry Department.

1746. RADIOACTIVE MATERIALS TECHNICIAN - Requires demonstrated mechanical skills for the maintenance and use of liquid pumps and liquid concentrators. Medical Department (reposting of job #1721).

SCIENTIFIC POSITIONS OPEN: The following staff positions are open. Candidates may apply directly to the department representative named, or through the office of Scientific Personnel, Ext. 3338.

RADIOCHEMIST - Requires Ph.D. or equivalent plus minimum of two years' radiochemistry experience. Position involves independent development of inorganic chemical separation/processing of radioactive targets as part of BLIP Research Program. Contact: D.C. Borg, Medical Department.

Autos & Auto Supplies

TIRE - VW, (1) 6-00-15, $8. 472-1397.

75 GRAN TORINO - a/c, excel. rebuilt carburetor, new battey, $1,200 or best offer. 399-2135.

MOTORCYCLES - 1966 BSA 441cc and 1966 Sears 250cc, good cond., $275 ea., trade for VW van. Frank, Ext. 2022 or 399-4480.

74 TRAIL BIKE - DT 100 Yamaha motorcycle, runs great, new plugs & points, lot's of fun, asking $350. Lou, Ext. 2022.

81 MERCURY CAPRI - 21,000 mi., black/red int., a/t, sunroof, am/fm 8-track, radials & snows, excel., $6,800, neg. Ken, Ext. 2350.

74 TORINO - high mi., new exhaust, shocks, a/t, p/s, runs o.k., good for parts, $425. Ken, Ext. 2350.

81 OLDS CUTLASS CALAIS - maroon, fully loaded, 11,000 mi., mint cond. 732-3549.

74 VEGA G.T. - 4 spd., runs, good cond., clean interior, $500. 732-5696.

73 OLDS CUTLASS SUPREME - a/c, a/t, p/b, p/s, good running, 120K. Joseph, Ext. 4789 or 878-1426.

78 MAZDA GLC - 4 cyl., auto shift, great mi., excel. cond. 928-6819 after 6 p.m.

72 MERCURY - p/s, p/b, a/t, asking $500. 473-7739.

69 CHEVELLE MALIBU - 6 cyl., new tires, brakes, trans., muffler system, very good, $1,000, neg. Scott, 281-1862.

71 CHEVY WINDOW VAN - 90,000 mi., runs good, 307 eng., 15+ mpg, needs body work, $750. John, 732-4068 after 6 p.m.

79 HONDA HAWK - motorcycle, 400cc, like new cond., $995. 588-0805 eves.

66 CHEVY NOVA - rusted, needs engine work, best offer. Dick, Ext. 4255 or 744-6794.

70 DODGE STATION WAGON - auto, 6 cyl., p/s, good cond., $500. Joe, Ext. 2897 or 281-7683.

73 HONDA CB350 - very good cond., 18,000 mi., $550. Joe, Ext. 2897 or 281-7683.

73 DODGE DART - runs very well, white vinyl top, $800. Moshe, Ext. 4407 or Ext. 7602.

FORD CAMPER VAN - raised roof, sink, stove, potti, sleeps 4, $1,800 or will trade for good running auto of equal value. Kevin, 281-8031.

56 FORD F-100 TRUCK - and parts; 74 Camaro parts; 68 GTO body parts; must sell (cheap). Don or Fred Paffrath, 499-1214.

TIRES - (2) D78-14, like new, less than 1K mi., $25 ea., or $40 for both. M. Kinney, Ext. 4316 or 924-3783.

79 HONDA - CM400T, 2,000 mi., garaged, must sell, $1,000. 981-0181.

80 KAWASAKI - KL250, good cond., asking $750. Ken, 924-4398 after 6 p.m.

69 ROAD RUNNER ENGINE - 383, good for parts or rebuilding, $100; 73 Plymouth Duster, 6 cyl., a/t, p/s, good cond., $850. 66 Plymouth Valiant, 6 cyl., a/t, good cond., $350. Rick, 727-7626 after 5:30 p.m.

72 VW SUPER BEETLE - good rubber, needs work, body fair, good parts, $300.

654-2076.

78 CAMARO LT - 37,000 mi., new blue lacquer, new wide steel radials, mags, a/c, tape, 350 cu. in., $5,300. 473-2473.

69 VW SQUARE BACK - old but reliable, $750. 473-7546.

80 CHEVY CITATION - p/s, p/b, am/fm stereo, new a/t, excel. cond. 473-8561 after 6 p.m.

78 DODGE ASPEN - 6 cyl., a/t, p/s, p/b, a/c, am/fm stereo cassette, $2,700. 399-4972.

79 FORD F150 - black, 4 spd., 4 wheel dr., 8 ft. bed, many extras, excel. cond., $5,600. 744-0742 after 6 p.m.

80 TRIUMPH - TR-7, 5 spd., white convertible, 17,000 mi., $5,900. J. Klein, Ext. 2294 or 298-8805.

76 HONDA CIVIC - std., excel. mpg, many new parts, runs excel., leaving ,$1,550 firm. 282-7997 or 282-3004.

76 AMC PACER - a/c, p/s, good cond., 82,000 mi., $1,500. Kim, Ext. 7679 or 929-3470.

76 MERCURY COUGAR - XR7, 52K, 351, am/fm, air, p/s, p/b, yellow, good, $3,000. John. Ext. 7626 or YA4-3417.

68 VW BUG - conv. classic, just restored, mint, $2,650. 589-9103.

80 SUZUKI - TS-trail and street bike, 100cc, mint cond., 960 mi., asking $650. Eric, 475-2946.

CHEVY - 4 spd. trans., clutch and bell housing assy., $100. Artie, Ext. 2674 or 325-0743.

CLARION - am/fm stereo radio, in-dash unit, original Datsun equipment, $40. Bob, Ext. 4527.

71 CHEVELLE - needs work, new engine, new paint, Hugar orange w/white stripes, $2,300. Ed, Ext. 2674.

SNOW TIRES (2) - C78-13, mounted on Toyota rims, $35 for both. John, Ext. 2173.

72 CHEVY - a/c, a/t, am/fm tape stereo, new tires, good cond. Dom, Ext. 4851 or 732-6995.

72 VW SUPER BEETLE - 4 spd., am/fm, 8 track stereo, new muffler, excel. cond. $1,895. Rose, 665-0889 after 5 p.m.

73 SUPER BEETLE - 4 spd., radial tires, very good running cond., clean interior, no problems, orig. owner, $1,800. 929-8204.

Boats & Marine Supplies

20' GARVEY - clamboat, F.G., in water, excel., 95 HP Mercury OB, will demo., $1,500. Ext. 7626.

SAILBOAT - Super Scamper 115, like new, $115. 472-1473.

12' SAIL BOAT - Lockley Sea Witch, used one season, w/main & jib, $900. 588-1671.

21' RENKEN - 1980 Cuddy, Volvo 120, i/o, full canvas, compass, many extras, excel. cond., $7,800. John, 981-0989 after 5 p.m.

19' O'DAY MARINER - sleeps 2, 4 HP Evinrude, trailer, spinnaker, extras, $4,400. J. Olson, 289-8629.

NYLON TARPAULIN - 14 oz., 28' x 16', used one season, $120, Gusher pump, new, $25. Bob, Ext. 4527.

Yard Sales

SHIRLEY - 517 Boxwood Dr., Sept. 2-3, 10-4 p.m.

MILLER PLACE - Sept. 4, 47 Radio Ave., 500' south of Rt. 25A.

RIDGE - Sept. 4, 5 and 6, 96 Woodlot Rd., many tools and fix-it items.

Free

PUPPIES - 6 weeks old, mother is black Lab-Shepherd mix, father, unknown. Charlie, Ext. 4758 or 273-8196.

KITTENS - Can you save a kitten by giving it a good home? Ext. 2980 or 289-0532 after 6 p.m.

RABBITS - (2) white, one yr. old. Ext. 3294.

Miscellaneous

BLACK & WHITE TV - 19", Admiral, $25; Scott spreader, $20; pine table, 34"x34", adjustable, $20. 472-1397.

SILVERWARE - sterling, for 8, $1,250; woman's diamond set, large size, $350. 475-0144 after 6 p.m.

TENNIS RACQUETS - Head Prof., 1 strung, $30; 1 unstrung, $20, or both for $40, 4-3/8 grip. R. Mele, Ext. 2514.

LADY'S RING - 14 kt gold, cubic Zirconia (pear shape), with genuine rubies on each side, new, never worn, $65. Linda, Ext. 7745.

MEN'S BIKE - 10 speed touring bike, w/basket, $50 firm. Howard, Ext. 2000 or 878-8294 after 6 p.m.

COAL STOVE - Hans & Sohn 121.12, 38,000 BTU, used 3 weeks, sells for $725, asking $625; speakers, Avid 105, 3-way acoustic suspension w/2 side firing tweeter, list $750/pr, asking $550. Al, Ext. 2072.

DESK - pine trestle deck, 32" wide, 5 drawer, excel. cond., $145, neg. 281-8274.

KITCHEN OVEN HOOD - stainless steel, 36", $10. Victor, Ext. 2395.

CHINA - Bing & Grondahl Danish, butterfly pattern, plates & serving pieces. 929-4096.

CHILD'S TRICYCLE - $10; hot wheel, $6. 331-9349.

WICKER SHELF - 3-tier, white, excel. cond., $20. Barbara, Ext. 4231.

COLOR TV - 19", Sylvania table model, excel. cond., $125. Richie, Ext. 4213.

SIAMESE KITTENS - $50 ea. 744-5096.

MEN'S BIKE - 10 speed, new cond., $100; Tappan wall oven, gas, $30; gas cooktop, $30; Hotpoint portable dishwasher, $50. 929-4886 after 5 p.m.

STEAMER TRUNK - excel. cond., $40. 589-3608.

DINING ROOM - Thomasville, oval table w/3 leaves, 6 chairs, table pads, 6' buffet, excel. cond., $600. Nancy, Ext. 7996.

LADY'S RALEIGH BIKE - 3 speed, Sturmey Archer shift, excel. cond., less than 1/2 price, $95 firm. 727-3608.

BOX SPRINGS - twin size, never used, $25. Ext. 3741 or 928-8465.

STEREO SYSTEM - excel. cond., $100; 17" B&W TV, like new, $40; 2-speed fan, 20", $10. Shmid, Ext. 7602 or Ext. 4407.

JALOUSIE WINDOWS - excel. cond., includes doors, best offer; pine trestle coffee table & 2 end tables, Town & Country furniture, $125, firm. 757-5478.

LIVING ROOM FURNITURE - crushed velvet couch w/queen sz. bed (Castro), chairs & ottoman, walnut coffee table w/glass top, octagon table w/hanging swag lamp, $750; kitchen set, oval table & 4 chairs, brown, woodtone top, $250. Annmarie, 585-5256 after 6 p.m.

FURNITURE - kitchen set w/6 chairs, $135; mirror, $40; 24" x 24" antique table, $35; antique mirror, $40. 331-9349.

SCHOOL DESK - child's, adj. height, pivoting seat, excel. cond., $30. Ext. 3593 or 286-3540 eves.

PUMP DEEP WELL - 2 stage 13 Gpm Burk, $125. Harris, 475-8504.

MUSCOVY DUCKLINGS - $1.50. John, Ext. 3675 or 924-3528.

EMERSON - AM/FM, stereo, multiplex receiver/stereo cassette recorder, $100. Don, Ext. 5373 or 286-0999.

PENN COAL STOVE - 60,000 BTU, also burns wood, 1 season old, must sell, moving. Ext. 3890 or 924-4250.

LADY'S ROSS BIKE - new, 10 spd., with rack and generator, $190. Ext. 3890.

HANG GLIDER - Rogallo type harness and helmet, $275. Ext. 2521 or 928-8379, eves.

MAGNAVOX ODYSSEY GAME - w/5 cartridges, excel. cond., $175. Ext. 3336 or 475-8456.

DINING ROOM SET - beds, garden chairs, Maytag washer, all in excel. cond., 363-6884 or 421-9392 before 8:30 a.m., after 6 p.m.

BLACKBOARD - 3-1/2 ft. sq., $20; Melmac service for 8, $15; electric broiler, $5. Judith, 698-3150.

CASSETTES - BASF Pro II, blank CrO_2, $2.75 ea. Ext. 2521 or 928-8379, eves.

TAPE RECORDER - Pioneer, reel to reel #RT-909, 3-motor, 4-head, auto reverse, auto repeat, 4-digit tape counter, takes up to 10-1/2 in. reel speeds, 3-3/4 and 7-1/2, new $900, asking $575. Al, Ext. 3992 or 331-1003.

CLUB CHAIR - cane backed, $50; combination storage and end table, $45; 25" color console TV, $250. 475-3104.

BATHTUB - authentic ball and claw, mf'd. Oct. 18, 1914, needs refinishing, $200. 286-2265, after 7 p.m.

ROTOTILLER - 36" wide, for yard tractor, never used, was $350, asking $200; rotary spreader, 1/2 bu. with PTO shaft for tractor use, used 2 hrs., $50; Wright 19" reciprocating saw, very good cond., needs carb. adj., orig. $319, asking $75. 929-4522 after 5 p.m.

REFRIGERATOR - 17 cu. ft., good working cond. Ext. 4315 or 924-0425.

COMPOUND HUNTING BOW - Stemler Stag, 2 wheeler, 52 lb., 30" draw, camo. color, $65. Stan, Ext. 3287 or 286-1062.

BATHTUB - old cast iron claw feet, $50; old sit-on grindstone, $50; highchair, $12; baby's walker, $5, all good. 878-6637.

TENT - Sears Hillary 10' x 14', sleeps 8 adults, screen windows and door; canopy, cots and air mattresses. 289-5825, eves.

SOFA & LOVESEAT - Contemporary herculon loose back cushions, white and brown w/wood trim, $250. 286-2890, after 6 p.m.

30'S BUFFET TABLE - or so I'm told! Good cond., $50 or make an offer. Ron, Ext. 3238 or 473-6862.

STEREO AMPLIFIER - Bogen, excel. cond., like new, 35 watts per channel, $60; upright organ, Magnus, model #535, 42 watts, $60; Siltronix 0-1500 watt meter, 2-50 MHZ, $50. 751-6418.

Real Estate

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

For Sale

OLD STONY BROOK NORTH - 100 yds. to beach, energy efficient, totally restored, 2-3 bd. rms., 1-1/2 baths, basement, brick patio, 2 car garage, fence, $1,100 taxes, $86,900. Ext. 2145.

LAKE RONKONKOMA - 4 bdrm., full basement, 75'x175', $10,000 down, $38,000 at 14%, 20 yrs. 588-7421.

YAPHANK - 3 bdrm. ranch, full basement, 2 lg. rooms on rear, 1/2 acre, 7-1/2% assm. mort., $13,700, cash over $28,000. 924-6895.

BELLPORT VILLAGE - 4 bdrm., 1-1/2 baths, full basement, lots of storage, close to schools, assumable mortgage, $60,000. 286-0925.

WADING RIVER - custom built, 4 bdrm., colonial, 2 baths, d/r, den, f/p, 2 car garage, full basement, private beach. Ext. 7727 or 929-4631.

MEDFORD - condominium, Birchwood at Blue Ridge, 15 min. from Lab, 3 bdrms., many extras, facing golf course, $50's. 698-7213.

SETAUKET - 4 bdrms., 2-1/2 bath, story book ranch, w/finished gnd level bsmt., 2-car garage, sundeck, walk to SUSB, almost 3/4 acre, beautiful setting, assum 9-1/2% mort. (wraparound also avail). $89,500. Ext. 7111 or 751-7268 eves.

For Rent

BROOKHAVEN HAMLET - 2 bdrm house, $350 plus util., available Oct. 1. 286-3694 for appointment.

PORT JEFFERSON - Harbor Hills, 4 bdrms., 8 rms., 3 bath, split-level, furnished, w/cable hookup, a/c, walk to beach, sublet Oct. 15-June 15, $500 mo. Ext. 4600 or 928-0466.

BELLPORT - 1 large room, full kitchen, private entrance, util. incl., $325, ideal for one person. 286-9051.

WADING RIVER - 3 rm. apt., all utilities incl., walk to beach, private parking. Available Oct. 1. 929-8772 after 1:00 p.m.

Car Pools

BELLPORT - existing 3 person pool looking for new members. George, Ext. 7654.

ELWOOD/E. NORTHPORT - one driver needed for five man pool. Fred, Ext. 4407

MASSAPEQUA/FARMINGDALE - and west, leave from vicinity of exit 32, Southern State Pkwy. Plotkin, Ext. 4717.

QUEENS/KEW GARDEN HILLS - wish to join car pool. Dr. Frimer, Ext. 3626 or (212) 544-2361.

Wanted

RIDE - to Lab occasionally. Elsa Kestler, 924-0576.

LOVING BABYSITTER - to care for child in my home (Port Jeff.), in a.m., 5 days/week. 473-0475 eves.

UTILITY TRAILER - 4' bed x 6' deep, approx. $100 to spend. 924-6751 eves.

HOMES FOR PUPPIES - 3 mos. old, Lab-mix spayed, female; Beagle-terrier, spayed, female; terri-mix, longhair, male. Ext. 2959 or 751-8168 eves.

AMBITIOUS PERSON - $200-$300/mo. 6-8 hrs./wk. 698-5861 after 7:30 p.m.

BOAT - dereliict old boat for children's playround. Ext. 2667 or 924-8160.

BUMPER CARRIER - for motorcycle. Ext. 3926.

MARATHON NUMBER - New York City. Ext. 3926.

8 FT. BOX - in good cond. for 1971 Ford pick-up; vendors for Sept. 18th flea mkt., $ space, (church). 878-6637.

CAR SEAT - for young child, prefer GM toddler seat. Artie, Ext. 2697 or 325-0743.

SKI BOOTS - men's sizes 10 and 7, ladies size 9. Ext. 2193.

Services

Services are listed as a courtesy to BNL employees. They are neither screened nor recommended by the ***Bulletin.***

BRIDAL PARTY GOWNS - sell or buy, resales. Ext. 2427 or 265-3039.

CATERING - Joe's homestyle, very reasonable prices for up to 100, 10% Lab discount, Italian favorites. Ext. 2697 or 744-2870 or 744-1367.

CHILD CARE - in child proofed home with nursery school atmosphere, near Lab. Kathy, 929-8809.

STEVEN'S VIDEO PRODUCTION - service with a personal touch, weddings, sweet 16, bar mitzvahs, sporting events, etc. 864-5132.

HOUSE SITTER - available. Dan, Ext. 3289 or 938-3051 after 6 p.m.

BASEMENT WATERPROOFING - 15 yrs. in the business, we guarantee all work in writing, free estimate & Lab discount when Bulletin is mentioned. 281-5445.

CHILD CARE - my home in Bellport, lots of TLC, any age, infants welcome. 286-2435.

EXTERMINATING - licensed men, all phases of pest control and termite specialists, no job too small, free estimates. 281-5445.

BABYSITTING - experienced woman p/t or f/t at my home, M-section, Stony Brook. 751-7180.

VERTICAL BLINDS - mini-blinds, wovenwood shades, shop-at-home service, discount prices, complete installation. Tony, 928-9241.

PLUMBING AND HEATING - Lab discount, John, 654-8189.

OFFICE/HOME CLEANING SERVICE - work by owners, free estimates, refs. Ray, Ext. 4444 or 732-4885 eves.

HOUSE PAINTING - interior/exterior, professional quality materials, insured. Bob, 289-7657 after 6 p.m.

OIL BURNER SERVICE - 15 yrs. exp., complete vacuum of fire box, new nozzle, new filter, 24-hr. service. 286-8862.

BASEMENT/ATTIC FANS INSTALLED - reliable. Joe, 399-0864.

FLOOR WAXING - and stripping, reasonable rates. Bill, 331-4641.

WALL PAPERING/PAINTING - reasonable, free estimates, no job too small. Ext. 4070 or 475-7272.

TILE SETTERS - ceramic quarry tile, no job too small, free est. E. Harris, 475-6460.

ASPHALT PAVING AND SEALING - Bob, 475-4382.

EXPERT FLOOR SCRAPING - staining and finishing wood, floor laying and repairing. Rick, Ext. 3932

LAWN MOWER REPAIRS - chain saws and small engine repairs. Jeff, 878-1847.

BUSINESS CARDS - 1000 for $19, printed envelopes & letterheads. 475-6981.

Classified Ad Policy Deadline is 4:30 p.m. Friday for publication Friday of the next week.