

Lab - Environment In Harmony

Brookhaven's Draft Environmental Statement, running well over 600 pages and the first written for a national laboratory, has just been released by ERDA. The Statement concludes that after 25 years of operation, the impact of Brookhaven on the environment is small.

The report assesses the influence of Brookhaven on the economic and socio-cultural life of Suffolk County. It estimates that the presence of the Laboratory in Suffolk County resulted in a net benefit to the regional economy during fiscal 1974 of about \$75,000,000. The Laboratory's income is derived from outside the region, but 53% of its expenditures enter the Suffolk County economy.

Salaries alone constitute about 57% of the Laboratory's annual budget. Brookhaven ranks among the top ten firms in the Nassau-Suffolk region in the number of employees. Local expenditures made by Brookhaven support an additional labor force in excess of 2000 people in related industries and in the commercial sector.

Co-existing with the sophisticated facilities on site is a large variety of plants, animals, birds, reptiles and fish. About 30 species of mammals have been recorded on site, or within a ten-mile radius, as well as 180 species of birds and 30 reptiles and amphibians.

The Environmental Statement estimates that more than half of Brookhaven's 5265 acre site "provides a natural habitat and serves as a sanctuary for many forms of wild life, some of which are endangered else-

where on Long Island by increasing urbanization and other environmental stresses." Two of the contributing factors to this sanctuary are the Laboratory's policy of permitting only a minimal use of pesticides, and the maintenance of fire breaks which protects the flora and fauna.

The ERDA investigation revealed that the estimated radiation dose in 1973 to the population within 50 miles of the site was about one thousandth of one percent of the dose received from natural background radiation. Neither this dose nor chemical releases have had any perceptible impact on human, animal or plant life. The use of the land by Brookhaven constitutes a net benefit to the community.

The Laboratory assisted ERDA in the preparation of the report which took about one year. Leonard C. Emma, on leave from the Health Physics and Safety Division, managed the project under the overall supervision of Associate Director Victor P. Bond.

The Draft Environmental Statement ERDA 1540 may be consulted at the study room in the Research Library. Also, limited copies are available from Leonard Emma, HP&S, Building 535. Written comments, returnable by January 27, 1976, are being requested from various Federal, state and local government agencies, environmental and other public groups and individuals. Comments received will be considered in the preparation of the final Environmental Impact Statement.



Dr. Gerald F. Tape, President of AUI (center) introduces administration officials to Dr. Dixy Lee Ray (right) at the start of her tour of the Laboratory on Tuesday, December 9. Clockwise from Dr. Ray are Associate Director V.P. Bond, Assistant Director R.C. Anderson, Associate Directors W.E. Winsche and V.R. O'Leary and Dr. L.J. Haworth, Special Assistant to the President of AUI.

Dixy Lee Ray, New Trustee, Returns to Real World of Science

"I am very glad to be here and it's nice to be back in the real world of science," said Dr. Dixy Lee Ray, newly appointed Trustee to the Board of Associated Universities, Inc., on her first visit to Brookhaven.

Dr. Ray spent two tightly scheduled days here this week getting a first hand look at the Laboratory. She was particularly impressed with the interdisciplinary approach to research and with "the people working together in ways that you don't see in most scientific laboratories." She found a lot that "was unique and innovative" and considered the superconducting work and the oceanography program of great interest.

Dr. Ray, former chairman of the AEC, and later, Assistant Secretary of State of Oceans and International Environmental and Scientific Affairs, is on leave from the University of Washington. She disclosed in an interview here Wednesday that she is seriously considering running for Governor of the State of Washington on the Democratic ticket. Dr. Ray is not identified with party politics and says, "I really believe in representative government and would like to test whether a citizen who has become interested in government administration can, in our present system, really run for public office." She has been sounding out people in the state and will make her decision in a month or so. If she does enter politics, her motor home which she had in Washington, will serve as a campaign vehicle in which she will try to visit every part of the state.

Dr. Ray is now on the lecture circuit and finds it both "hectic and interesting." Her lecturing experience has given her a different view of science than she had and, in particular, an understanding of how the public looks at science. Her particular concern is the proper role of science in government, and of government in science, and "they are not easy bedfellows," she says.

Asked about her position on the Equal Rights Amendment, Dr. Ray was strongly in support of the effort to remove problems women face in getting credit, signing for mortgages, or conducting business as single women, and problems of that nature. She considers some of the opposition to ERA on a par with some of the opposition to nuclear power - neither have a logical base.

On the other hand, Dr. Ray thinks the "personship junk is awful." When she was sometimes introduced as "Chairperson" of the AEC, she objected. "The name of the job is Chairman," she said. The forthright Dr. Ray thinks the best contribution she can make as a woman is "to do the job at hand the best way possible."



Dr. Dixy Lee Ray, newly appointed AUI trustee, looks at a crystal on a neutron diffractometer at the HFBR, during her visit to Brookhaven on December 9 and 10.



Associate Director V.P. Bond (left) and Dr. Dixy Lee Ray listen as David Gurinsky, DAS, talks about superconductivity and superconducting power transmission lines.



At the HFBR Gen Shirane discusses physics research with Dr. Ray.

(More Pictures Page 2)



(Left) Smith Pearsall (HPS), an assistant instructor, demonstrates a technique, using adult mannikin, at recent cardio-pulmonary resuscitation lesson. Senior Instructor Richard Skelton (right) supervises the working groups.

Training For Quick Action

Fourteen Brookhaven Firefighters have begun training in a wide range of emergency medical skills from mouth-to-mouth resuscitation to emergency childbirth techniques.

They are part of a group of 36 individuals, including members of the Coast Guard and local community volunteer ambulance corps, being trained at the Brookhaven Center in emergency care. At the Laboratory, the Health Physics and Safety Division has the responsibility for such care and has designated the Firefighters as the appropriate unit to provide this important service.

The 81-hour course is administered by Suffolk County for the State of New York. The Laboratory is providing the facility as well as many of the instructors. The senior instructor for Suffolk County is Richard Skelton of Brookhaven's Medical Department, who is a qualified New York State EMT Instructor. The course emphasizes the development of skills in recognition of symptoms of illnesses and injuries and the proper procedures to be followed.

The group meets twice a week at the Center for three-hour sessions. The first part of the morning is devoted to a lecture or film, followed by questions and answers on the subject under study. The remaining time is spent in the practice of specific skills

with the appropriate training aids.

For instance, cardio-pulmonary resuscitation was studied at a lesson earlier this week. The group practiced mouth-to-mouth resuscitation and cardiac compression on

(Continued on page 2)



Assistant Instructor Dan Gilliam, a BNL Firefighter, demonstrates methods of handling infants caught in emergency situations to Susan Carr a member of the Port Jefferson Volunteer Ambulance unit.

Save Fuel

When leaving the Lab at the end of the day, turn down the thermostat to 60 degrees.

In the morning, set the thermostat to 68 degrees maximum.

Dr. Dixy Lee Ray Visits The Laboratory



Dr. George Jeffrey (left) Chemistry Department, shows Dr. Ray a model of guanidinium sulfate. To her right is Dr. Leland J. Haworth, Special Assistant to the President of AUI.



In the Chemistry Department, Dr. Ray looks at autoradiographs of paintings with (from left) Gar Harbottle, Chemistry; Associate Director Vincent O'Leary, Associate Director Victor P. Bond; Dr. Ray; AUI President Dr. Gerald F. Tape, and Kathleen Taylor, Chemistry.

Training

(Continued)

four adult size mannikins and two infant models.

The course is extensive and, among other things, the group will learn the techniques of bandaging wounds, splinting fractures, evaluating injuries and extricating persons who may have been trapped in a vehicle as a result of an accident.

One of the requirements of the course is that individual students must spend ten hours in the emergency room of a local hospital. After they pass mid-term, final written examinations, and practical demonstrations of the skills learned, they will be certified by New York State as Emergency Medical Technicians.

Dr. Robert A. Love is the Medical Advisor for the course. Dr. Daniel Slatkin, also of Brookhaven's Medical Department, recently lectured the group on anatomy and physiology. Other lecturers will be physicians and technical specialists from the local community.

Lab employees Dan Gilliam, Smith Pearsall, and Michael McAllister, all of Health Physics and Safety, are already qualified as Emergency Medical Technicians and are assistant instructors in the course.

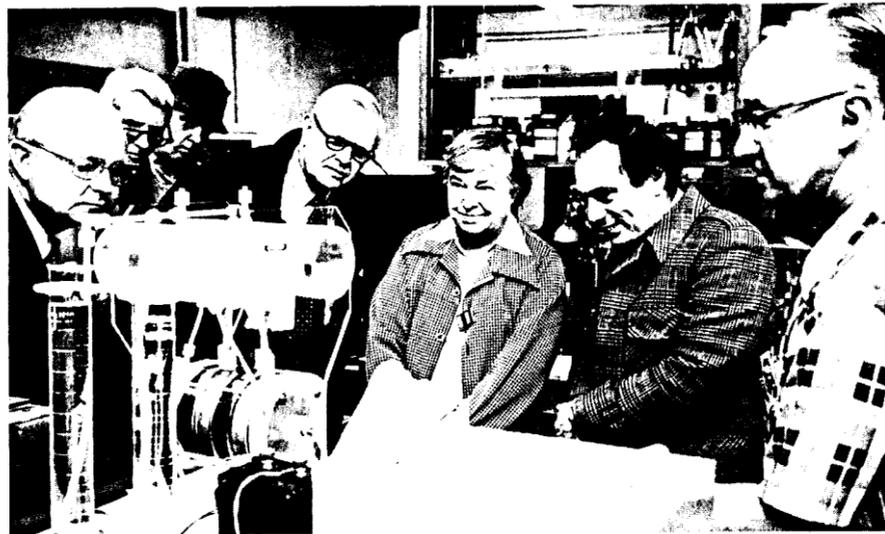


BNL Patrol Officer Michael McAllister, an assistant instructor, checks out a written problem during testing period of session. McAllister is also a volunteer fireman in the Farmingville Fire District.

Emergency Closings

Lab employees are urged to listen for notices affecting working hours before starting to the Lab on snowy days. Information on revised schedules due to inclement weather will be carried by the following stations:

Station	Area	AM	FM
WGSM	Huntington	740	-
WCTO	Smithtown	-	94.3
WGLI	Babylon	1290	-
WBLI	Patchogue	-	106.1
WLIX	Islip	540	-
WHLI	Hempstead	1100	98.3
WBAB	Babylon	1440	102.3
WLNG	Sag Harbor	1600	92
WALK	Patchogue	1370	97.5
WRIV	Riverhead	1390	-
WRCN	Riverhead	1570	103.9
WWRJ	Southampton	-	95.3



At DAS, George Kissel (right) demonstrates a model of a bipolar water electrolyser to (from left) Associate Director Victor Bond; DAS Chairman Joseph Hendrie; Associate Director Vincent O'Leary; AUI President Gerald F. Tape, Dr. Dixy Lee Ray and Frank Salzano, DAS, who briefed the group on the Hydrogen Program.

Arrivals & Departures

Arrivals

William J. Brynda Reactor
 Cesar Dopazo Applied Science
 Daniel F. Shreeve Applied Science

Departures

None

The United Way — Invest In Each Other

In recent years one out of every four Long Islanders used the services of United Way, sometimes not knowing that they were United Way services. Youth benefit from many organizations, and other services are available too: individual and family counseling, day care, research in health, welfare, and recreation fields. Health, marital, age and youth problems as well as those caused by handicaps can strike anyone.

Concern and compassion for the less fortunate are part of America's tradition... and of responsible citizenship. A letter recently received from a Laboratory employee illustrates this concern and sense of responsibility:

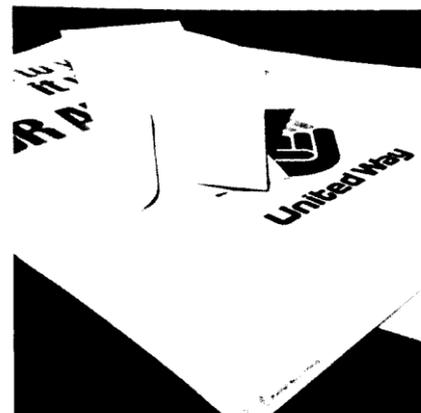
Once again the United Way appeal is underway here at BNL. The mere fact that we are all being hit hard by increases in everything we buy indicates that there is a greater need than ever before to support this year's campaign.

Each year I have tried to increase my contribution by at least 25¢ and I have not missed that money. For those of us who have never contributed, and I have heard that there are many such, it might be enlightening to reflect that we are all working and earning a week's pay; others are not so fortunate. Let's share as much as we can.

Barney McAlary, campaign chairman, reports that a number of letters were inadvertently sent out minus pledge cards. A call to Olga Vario, Ext. 2487, will secure one promptly. Although contributions are not refused at any time, employees are encouraged to return their pledge cards by the end of December. Please give generously. The United Way of Nassau-Suffolk is an investment in each other.

Solar Energy Telecast

Warren Winsche, Associate Director for Energy, will be a guest on Channel 21's Long Island Newsmagazine to discuss solar energy on December 18 at 7:30 p.m. A viewer call-in program on solar energy on Long Island with three other experts giving on-air answers to questions about Nassau-Suffolk activities in this field will follow at 8:30 p.m. Solar energy will be the news focus on Channel 21 during the week of December 15.



Laboratory Director George Vineyard checks the progress of the United Way campaign with Beverly Goldstein who is in charge of publicity.

BROOKHAVEN BULLETIN

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In Memoriam

It is with deep regret that we have to announce the untimely death of Dr. Gulzar Singh. Dr. Singh had been a Research Associate in the Engineering and Systems Division of the Department of Applied Science since December 15, 1974. The members of the Laboratory wish to express their deepest condolences to his wife, Khushdev, and to their relatives.

TUNE IN! CONSERVE OIL

#390 *I understand that the Laboratory uses a low grade fuel for heating. If every employee who changes his own motor oil brought the used oil into a collection center at the Lab to be used as heating fuel, I think this would add up to quite a savings in the Lab's fuel bill. The used oil could be transported in used bleach or clorox containers to prevent spillage. If 25% of the employees participated by bringing in an average of one gallon of oil every three months, this would total up to about 3000 gallons per year. It may be possible to also have the Citgo Service Station on site and local service stations cooperate. Besides saving fuel, this would be a benefit to the ecology.*

P.S. What is being done with the oil changed at the Motor Pool on-site? This oil could also be used.

Answer: Thank you for your letter. It's right on target!

Indeed BNL has been using reprocessed waste motor oil as heating fuel since 1973. As reported in the *Brookhaven Bulletin* (June 29, 1973) a cooperative project was begun with the Town of Brookhaven, which collects the oil at designated depositories. It is collected from garages and gasoline stations to prevent it from being dumped into landfill sites, streams, lakes or the ocean.

BNL has mixed up to 25% "waste oil" with either No. 4 or No. 6 oil. Purchased at 15¢ per gallon less than the present cost of virgin oil, over 4 million gallons have been used, representing a savings to the Laboratory of nearly \$600,000. And its use as a blend has been documented by both the American Petroleum Institute and the Environmental Protection Agency as causing no harmful effects to the environment. In addition, BNL's own Biomedical Environmental Assessment Group did a study corroborating their conclusions. So its use has helped to defray costs... and environmental degradation.

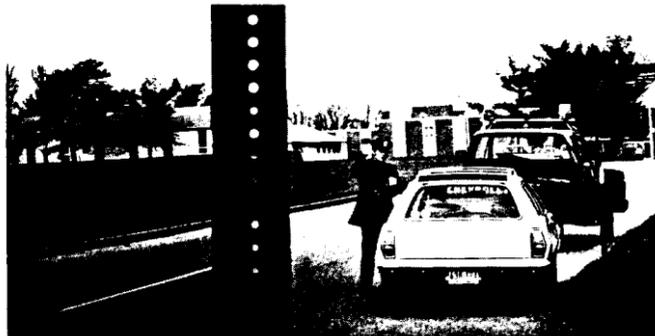
Employees are certainly encouraged to bring their waste motor oil to the Citgo station on site or to other Brookhaven Town depositories. The oil collected by Citgo and the Lab's motor pool and machine shop must first be sent to a reprocessor to remove impurities before it goes into Lab boilers. Certain standards must also be met by each truckload of reprocessed oil as it comes on site.

Besides using "waste oil," the Laboratory is constantly on the alert for other ways to conserve not only virgin oil supplies but to cut rising costs as well. To this end, the Purchasing Department has been on its "toes." An arrangement has just been made with the Navy to acquire 3 million gallons of oil long stored in the hulls of inactive ships. Declared excess to present Navy needs, the oil is being taken off such famous warriors as the Battleship Iowa and Wisconsin and transported to BNL from the Philadelphia Navy Yard at an approximate cost of 13¢ per gallon. This results in a price differential of almost 20¢ per gallon - a savings of \$600,000.

Due to energy conservation measures, the Lab has reduced its consumption from 8 million to around 6½ million gallons per year. The Navy oil will supply 1½ million gallons per year over the next couple of years; the balance will be supplied by existing contracts.

Once again, many thanks for your inquiry. The alertness of our employees to saving energy - and dollars - is very much appreciated.

— Vincent O'Leary
 Associate Director



Long familiarity with the Lab site has led some people to ignore stop signs and speed limits. Employees should keep in mind that the site speed limit is 30 mph unless otherwise posted. Traffic signals and signs are there for a reason. During the past year several serious motor vehicle accidents resulted from employees' failure to heed traffic signs. Special care should be taken to watch for pedestrians crossing roads to parking areas during the evening hours. Robert



Young, who is in charge of safety and plant protection, reminds employees that careful driving does not stop at the gates of the Lab. He urges everyone to be particularly careful during the holiday season. Defensive driving offsite, a good practice at all times, is of particular importance during the holidays. Freezing weather, snow conditions and parties can make driving a risky proposition.

Classified Advertisements

Placement Notices

Each week the Personnel Office lists personnel placement requisitions, currently being processed. The purpose of these listings is, first, to give notice of all non-scientific staff positions being filled and, second, to give employees an opportunity to request consideration for themselves through the Personnel Office. In filling vacancies, the Laboratory's objective is to give first consideration to present employees, as follows: employees within the immediate group having the vacancy, employees within the department or division, employees within the Laboratory as a whole.

For further information regarding a placement notice, or to request consideration for an available position, contact Supervisor, Personnel Placement & Development, extension 2874 or 2882.

282. FACILITIES ENGINEER - Bachelor's degree or equivalent in architectural design and approximately 5 years' experience in engineering analysis, design, and estimating and procurement of services and materials associated with the erection of buildings and other structures. Plant Engineering Division.

283. PHOTOGRAPHY & GRAPHIC ARTS TECHNICIANS (2) - AAS degree in art or equivalent plus some experience and working knowledge of LeRoy System desirable. Graphic Arts Illustration Section. Photography & Graphic Arts Division.

284. DATA SERVICES ASSISTANT - Temporary position. Applied Mathematics Department.

285. SECRETARY - AAS degree or equivalent in secretarial science with steno and dictaphone experience desirable. Computer Services Division. Applied Mathematics Department.

286. SECRETARY - AAS degree or equivalent in secretarial science with steno skills and technical typing experience. Neutron Nuclear Physics and Medium Energy Groups. Physics Department.

287. SECRETARY - Temporary position. Department of Applied Science.

288. OFFICE SERVICES ASSISTANT - Technical Information Division.

289. SECRETARY - Personnel Division.

290. CUSTODIANS (3) - Plant Engineering Division.

291. LABORERS (3) - Application deadline: December 24, 1975. Plant Engineering Division.

292. PLUMBER A - Under minimum supervision lays out, constructs or installs, repairs, and maintains water and gas distribution systems, related facilities and auxiliary equipment, and utilizing water, gas and heat distribution services. Application deadline: December 24, 1975. Plant Engineering Division.

293. CABINETMAKERS A (2) - Under minimum supervision lays out, constructs, modifies and maintains furniture, laboratory equipment and buildings and component parts. Works with wood, wood substitutes and combination materials and flooring, roofing and wall materials. Uses hand, portable and fixed tools common to building construction and cabinet making trade.

Works from prints, rough sketches and verbal instructions.

Requires broad shop skills to perform difficult operations requiring ingenuity on complex jobs where previous standards or methods of operation do not offer complete solution. May perform Carpenter duties as required. Application deadline: December 24, 1975. Plant Engineering Division.

294. CARPENTERS (2) - Under minimum supervision lays out, constructs, modifies and maintains buildings and component parts from construction drawings, rough sketches or verbal instructions. Works with wood, wood substitutes and combination materials and flooring, roofing and wall materials.

Uses hand, portable and fixed tools common to building construction trades. Installs cabinets, door frames, window glass, interior finishes and hangs doors. May perform Cabinetmaker duties as required. Application deadline: December 24, 1975. Plant Engineering Division.

295. SIGN PAINTER - Under minimum supervision lays out, plans and composes a wide variety of signs, posters, symbols, etc., using all colors and materials both business and decorative. Must be capable of freehand lettering all styles, silk screen work and stencil cutting.

May renovate existing signs, and install new or renovated signs in field using such tools as required. Requires broad shop skills requiring ingenuity on complex jobs where previous standards or method of operation do not offer complete solution.

May be required to work as Painter. Application deadline: December 24, 1975. Plant Engineering Division.

296. HELPERS A (2) - Paint shop. Application deadline: December 24, 1975. Plant Engineering Division.

297. HEAVY EQUIPMENT MECHANIC OPERATOR, GROUP LEADER - Assists supervision in a semi-supervisory capacity and maintains, operates and repairs all material handling, earth moving, road and ground maintenance, and similar equipment, including repair and maintenance of gasoline and diesel engines and the use of required machine tools. Application deadline: December 24, 1975. Plant Engineering Division.

298. HEAVY EQUIPMENT OPERATOR - Under general supervision operates all material handling, earth moving, grounds and road maintenance and similar equipment. May perform maintenance and repair of equipment as required. Application deadline: December 24, 1975. Plant Engineering Division.

299. HELPER B - Office machine repair shop. Application deadline: December 24, 1975. Supply & Materiel Division.

Official & Special Events

Wednesday, December 17
New York Institute of Technology Tour
Navy Meeting
Trustees Committee on BNL

Wednesday, December 24
½ day holiday

Thursday, December 25
Holiday - Christmas

Friday, December 26
Floating Holiday

Nursery School

Upton Nursery School is in recess until Monday, January 5, when its normal schedule of classes for three and four year old children of Lab employees will resume.

If there is sufficient interest, a new inter-age (3-4 years old) class will be formed to meet on Tuesday and Thursday afternoons. Only those children not currently enrolled in the Nursery School will be considered for the new class. Interested parents should contact the enrollment chairperson, Linda Lynn, at 925-8329.

Cooking Exchange X-mas Party

The BNL Cooking Exchange Christmas party will be held on Wednesday, December 17, from 12:30 p.m. to 2 p.m. (note usual meeting time) at the Recreation Building.

Bring a large plateful of your favorite Christmas sweet - cookies, cakes, candies, etc. - along with the recipe. Babysitting as usual.

Everyone welcome!
Merry Christmas to all!

Selected Reading

- Nature 258, November 20, 1975
- Model for the accumulation of radionuclides in oysters and sediments. C.T. Hess, C.W. Smith and A.H. Price, II. 225-6
- Naure 258, November 27, 1975
- The Chinese dimension. 277
- Sci. Amer. 233, December 1975
- The arrow of time. D. Layzer. 56-69
- Science 190, November 28, 1975
- Hazel Henderson: Nudging society off its macho trip. C. Holden. 862-4
- The 1975 Nobel prize in physics. H. Feshbach. 868-70

EMERGENCY PHONE NUMBERS

Medical 2222
Fire 3333
Police 4444

Bowling News

Cathy Van Noy

Pink League

The "Pinsplitters" are in first place with the "Hopefuls" only one game behind. The league is still looking for girls as subs or replacements.

Red League

The lanes were in good condition according to the following scores, R. Wilson 229-200, W. Kollmer 215, R. Nelson 210-201, J. Scesny 205, P. Klotz 203, N. Anderson 202 and R. Meier 201.

Purple and White League

The "Streakers" struck and took 7 from the "Flounders." This has tightened the league considerably. They also have the high gross game series with a 894. High for the evening were Ed Sperry with a 230-575 scratch and Irene Sperry with a 417 scratch.

Green League

The "Got-a Hit-ums" remain in first place by taking eleven from the "Soc-et-tuums." The "Blue Jays" are five points out as they took eleven from the "Cosmos." The "Sparks" moved into third by taking four from the "Lucky Strikes." 200 games were rolled by F. Short 229, T. Iarocci 210 and J. Mayeski 210.

Volleyball News

Mixed League Results - week of 12/1

Trolls	3	Highballs	0
Nuts & Bolts	3	Diamonds	0
Setups	2	Medicine Ballers	1
Terabits	3	Spikers	0

Mixed League Standings

	W	L
Terabits	8	1
Trolls	8	1
Nuts & Bolts	5	4
Diamonds	4	5
Setups	4	5
Spikers	3	6
Highballs	2	7
Medicine Ballers	2	7

Mens League Results - week of 12/1

Cool Tools	2	Spikers	1
Atom Spikers	2	Easy Aces	1
Busters	2	Circuits	1

Mens League Standings

	W	L
Spikers	10	2
Cool Tools	9	3
Easy Aces	6	6
Atom Spikers	5	7
Busters	5	7
Circuits	1	11

Badminton Notice

The Gymnasium will be open for badminton players on Saturday mornings from 10 a.m. to 12 noon and on Sunday afternoons from 2 p.m. to 5 p.m.

This schedule will be maintained as long as there is continued interest in this activity.

Soccer

John Skalyo

The indoor soccer league is approaching the halfway mark of the season and last year's champions, AGS, have moved smartly to the lead. The three highest scorers are from AGS (Fleischman - 8, Batchelor - 4 and Oldham - 4). The AGS's team move to the top of the league could well be due to the absence in the Physics lineup of the injured Murtagh.

DAS-Chemistry seem to be lacking a scoring punch this year and show only four goals for the season.

The games originally scheduled for December 19 are cancelled due to the holidays and will be played on January 9.

League Results (Dec. 5, incl.)

	W	L	T	Pts.
AGS	7	2	1	15
Phy-AMD-Inst	4	2	4	12
DAS-Chem-Med	0	7	3	3

Slo-Break Basketball

Dr. K.

The Slo-Break basketball season opened at BNL last Thursday night with two games

In the early game The Persuaders, last year's champions, soundly defeated The Browns 66 to 52. Their balanced scoring attack was led by Reggie Clark and Brent Johnson who each totaled 14 points.

In the last game The Spuds were defeated by The Condors 55 to 53. Big scorers for The Spuds were Dave Gaffney with 26 points and Dennis Nordstrom with 16 points. Jim Vaughn and Mac Thomas led The Condors to victory with 18 and 15 points respectively.

This weeks games are shown below:

Game	
5:30	Browns (0-1) vs Spuds (0-1)
7:00	Condors (1-0) vs Persuaders (1-0)

English Class

Terri Pittenger will resume English classes on Monday, December 15, at 9 a.m. in the Recreation Building. Babysitting will be provided.

