

BNL's Budget Stays Relatively Flat for Fiscal Year 1997

Just over a month into fiscal year 1997 (FY97), it is becoming clear that BNL's total budget for FY97 is essentially level, compared to FY96. Having had a budget of almost \$407 million in FY96, Brookhaven is expecting to receive more than \$400 million this year — and this means both good news and bad news for the Laboratory.

On the plus side, BNL's Relativistic Heavy Ion Collider (RHIC) Project is fully funded at \$65 million for FY97, so RHIC is still on schedule for completion in 1999.

On the minus side, a flat budget leaves little leeway for the effects of inflation. So, said BNL Budget Officer

Richard Melucci, "There may be some reductions in force again this fiscal year, but I don't expect a major layoff. Because we have some concerns about specific programs, we expect that there will be specific realignments throughout the year, though where they will be is not yet clear.

"But overall," Melucci continued, "Brookhaven has done pretty well, particularly compared to other DOE labs. We're in good shape."

Operating Funds Level Off

President Bill Clinton signed the Energy & Water Development appropriations bill from which BNL derives most of its funding before the current

fiscal year began on October 1. This bill directly funded most of the U.S. Department of Energy (DOE), which only then could begin allocating firm monies among its various departments and contractors, including BNL.

To ensure that funding would be continuous from one fiscal year to the next, however, DOE had issued a financial plan in October based on a worse than worse-case scenario. This is the plan under which BNL is cur-



Richard Melucci

rently operating, but, says Melucci, "We know we're getting substantially more."

DOE's October financial plan gave BNL \$210 million in operating funds, considerably down from the \$250 million the Lab received in FY96. Melucci is confident, however, that actual operating funds "will probably go up to about \$245 million."

BNL's operating funds will be divided among several major (continued on page 2)

DAT Tests Electric Cables Used in Nuclear Power Plants



Roger Stoutenburg

At the Electric Cable Test Facility in Bldg. 939 (from left) Robert Lofaro, John Taylor, Michael Villaran, Robert Hall, Louis Gerlach and Bom Soon Lee, all of the Department of Advanced Technology's Engineering Technology Division, test electric cables used in nuclear power plants, for a program sponsored by the Nuclear Regulatory Commission.

On the Way: Natural Gas Is Coming to BNL Site

By the end of next summer, natural gas will be available at BNL.

The U.S. Department of Energy (DOE) has signed an agreement with the Long Island Lighting Company (LILCO) to purchase 1.8 million dekatherms (one dekatherm is the equivalent of 1 million Btus) of natural gas over a three-year period. The contract helps BNL comply with DOE policy to reduce petroleum-based fuel usage as much as possible.

The contract provides for LILCO's supplying and installing a two-mile-long gas pipeline at no cost to BNL, while DOE has provided funds to convert the Lab's oil-fired boilers to burn either oil or natural gas. In addition, at temperatures below 30°F, LILCO may interrupt BNL's gas service in order to supply heavier demand elsewhere. During such periods, the Lab would switch to oil.

"In this way, everyone will benefit," said Mike Bebon, Assistant Director for Management & Physical Plant. "With the gas option in place, BNL will save in dollars and energy use. LILCO will gain from the flexibility of being able to satisfy sudden heavy demand in very cold weather without having to

maintain large stocks of unused gas in reserve. This convenience will also help Long Islanders who use gas from LILCO — more gas will be available when they need it."

Mark Toscano, the Plant Engineering (PE) Division's Energy Manager, explained the advantages of having the natural gas option at BNL. "Cost is a big factor. For example, at current prices, with oil at \$4.30 per million Btus, and gas at \$3.12, our estimated savings would be about \$500,000 a year. Oil prices fluctuate, so these figures will vary, but oil prices have been higher for some time. After the three-year contract is over, we can buy whichever fuel is the least expensive when we need it."

Other savings will come from using gas. Unlike oil, gas burns with virtually no soot deposits that must be cleaned off equipment. Gas needs no preheating to flow, nor does it have to be atomized — broken into small particles with steam — in order to burn more efficiently.

"From these reduced maintenance and energy costs, we'll save roughly \$150,000 a year," Toscano said.

(continued on page 2)

Each of the 109 commercial nuclear power plants in the U.S. has several miles of electric cables — and, since many of these cables control safety mechanisms, it is extremely important that they function at an optimal level.

To ensure that the cables will still function efficiently and safely after they have been exposed to radiation and high temperatures for several decades, BNL's Department of Advanced Technology's Engineering Technology Division (ETD) is testing three types of polymer-insulated, low-voltage instrumentation and control cables commonly used in nuclear power plants.

Called the Environmental Qualification Research Program, this five-year cable-testing project is funded by the U.S. Nuclear Regulatory Commission (NRC).

Some of the nation's nuclear power plants are approaching 40 years of age, and electrical cables exposed to

radiation and excessive heat for such long periods can degrade.

ETD will study the process used by the Institute of Electrical and Electronics Engineers for qualifying these cables for use in nuclear power plants, as well as methods of monitoring the condition of the cables at the sites where they are in use.

"BNL has over a decade of expertise in studying components and materials used in nuclear power plants for degradation due to age," said Robert Lofaro, a research engineer in ETD who is in charge of the electric-cable testing program in Bldg. 939, the site of the Neutral Beam Test Facility which had been used originally to test components for the Strategic Defense Initiative.

He explained, "We have the capability to age the cables artificially to simulate 20, 40 and 60 years of service. We then compare the functioning (continued on page 2)

Two Public Meetings on BNL

Speaking Out in Southampton

The Lab and its environmental record will be the topic of a forum titled "BNL Speaks Out," to be held tomorrow, Saturday, November 9, at the Fine Arts Theatre of Long Island University's Southampton College, sponsored by the World Affairs Council. All are welcome to attend.

The afternoon will begin at 3:30 p.m. with lobby exhibits on Brookhaven's research. Then, at 4 p.m., brief talks will be given by: Sue Davis, Associate Director for Reactor, Safety & Security; Robert Casey, Head of the Safety & Environmental Protection Division; and Jean Howard, a physician in the Medical Department. A reception will follow.

For more information, call Public Affairs, Ext. 2345. Southampton College is located on Montauk Highway in Southampton.

Discussing EDB in Manorville

To solicit public comments on proposed alternatives for addressing groundwater contamination in an undeveloped area of Manorville, BNL and the U.S. Department of Energy are holding a public meeting on Wednesday, November 13, at the Dayton Avenue Middle School gymnasium in Manorville. An informal workshop will begin at 5:30 p.m., followed by a formal hearing at 7 p.m.

Two reports describing the contamination and identifying possible cleanup alternatives — the *Operable Unit VI Focused Feasibility Study* and the *Operable Unit VI Proposed Remedial Action Plan* — are available for public review and comment in some local libraries, including BNL's Research Library. The comment period runs through December 6.

Operable Unit VI encompasses about 340 acres in the Lab's southeast corner. Relatively undeveloped, this land contains cultivated field and forest plots used for agricultural research in BNL biology experiments.

The contaminant of concern is ethylene dibromide (EDB), an agricultural pesticide commonly used nationwide and in the BNL biology experiments in the 1960s and '70s. Banned from agricultural use in 1984, EDB has been found in an undeveloped area of Manorville at concentrations of up to 3.5 parts per billion (ppb), exceeding the New York State drinking water standard of 0.05 ppb.

For more information, call John Carter, Ext. 5195, or Mary Dernbach, Ext. 6336, in BNL's Office of Environmental Restoration.

It's Time to Break the Lab's 25-Year-Old Blood Drive Record

With the aid of two helicopters, 16 gallons of blood from 128 BNL employees flew quickly and directly to New York City for special processing in its lifesaving mission on June 29 and 30. The 16 gallons were randomly selected from 925 pints donated. The other 100 or so gallons will remain as whole blood for Long Island use.

As reported in the Brookhaven Bulletin of July 1, 1971, BNL's first Blood Drive was a huge success, setting a record for donations that has never been broken in the 25 years since then. But records for need are broken every year on Long Island. The population explosion in Suffolk County in the past 25 years has brought more traffic and more accidents — and more need for blood. More people also mean more of other types of blood-requiring crises, such as heart surgeries. The BNL community is but a microcosm of the larger Long Island community, so if the need for blood keeps rising while donations keep declining, both communities are in trouble. There is a silver lining if, for the



Were you there 24 years ago when this photo of eager blood donors was taken in 1972? Some 700 pints of blood were collected then, about 250 fewer than the 952 pints collected in the BNL Blood Drive's first year, 1971. Be there this year to help the Lab reach that amazing record again.

silver anniversary of the Lab's first Blood Drive, all BNLees consider pledging to give blood at Brookhaven's next

Blood Drive, Tuesday and Wednesday, December 3 & 4, from 10 a.m. to 3 p.m., at the Brookhaven Center.

Lab's Budget (cont'd.)

areas. Funding for high energy physics is level, overall, while nuclear physics is significantly increased. Right now, that translates into the AGS's running for 21.5 weeks during FY97, as compared to 29 weeks for DOE in FY96. But, Melucci said, "Often, this projection is less than what actually happens. Between our requesting additional monies from DOE and the department's tightening its belt even further, the AGS may end up with several more weeks of run time than originally allotted." Funding for basic energy sciences (BES) at BNL, which includes programs in materials and chemical sciences, energy biosciences, geosciences and applied mathematics, will go down approximately 5 percent. This is a several million dollar reduction in FY97, to \$68 million.

The two major BES facilities at Brookhaven are the National Synchrotron Light Source, which is scheduled for the same 40 weeks of operation as in FY96, and the High Flux Beam Reactor, which is now scheduled to run for only six 30-day cycles this year, down two cycles from the planned schedule. Melucci also noted that the Lab's funding for biological and environmental research may be down a bit. Monies for defense programs, which involve much of the Department of Advanced Technology's efforts in nuclear safeguards, remain about the same. Also expected to hold steady is funding for BNL's environmental restoration and waste-management programs.

Concern for Educational Programs

DOE is in the process of allocating operating monies to BNL based on the way funding was earmarked in the budget that Congress approved and Clinton signed. That budget, however, zeroed out all funding for DOE's educational programs, so, in order to continue supporting educational programs at BNL and the other national labs, DOE is considering replacing the lost Congressional funds with funds from individual DOE programs. "We are optimistic that this will happen, at least to some extent," said Melucci, "because nobody wants to see these programs wiped out." In addition to operating funds, BNL receives construction money, which, at \$89 million (including RHIC) for

FY97, is up slightly from FY96's total of \$87 million. Further, the Laboratory receives funding for capital equipment. Until this year, these major equipment purchases had to be a minimum of \$5,000 to be considered capital expenditures; in FY97, the minimum has been raised to \$25,000. The Lab's capital equipment budget has gone down a bit — from \$22.8 million in FY96 to 18.9 million in FY97. Many things that were formerly purchased from capital funds, from computers to cars, will now come out of operating funds. "Since there are no increased operating funds," Melucci said, "this presents us with a problem that we and all the other DOE labs are now addressing." Another significant portion of BNL's funding comes from "Work for Others"

Cable Testing (cont'd.)

of these artificially aged cables with that of cables obtained from various nuclear power reactors in the U.S." The testing focuses on polymer materials used for cable insulation — the part of the cable susceptible to degradation. First, spectroscopy and oxidation measurements, as well as various mechanical and electrical tests, are performed on the cable samples to obtain baseline data. Then, to simulate the aging process, the new cable samples are wrapped around a metal mandrel, baked in an oven at a temperature as high as 150°C, and exposed to gamma radiation from a cobalt-60 source. Under these conditions, the cable is energized and monitored to determine if it is functioning properly. BNL has subcontracted with Wyle Laboratories in Huntsville, Alabama, to test long cable samples — about 5 to 15 feet in length — to determine how they would function during and after a loss-of-coolant accident. At Wyle, these long cables are exposed to gamma radiation, high-pressure steam and chemical sprays to simulate accident conditions. Following the accident simulation, the cable is submerged in water before high voltage is applied to test the insulation's performance. At BNL and Wyle Laboratories, various monitoring techniques are being evaluated for determining the condition of cables in use at the nuclear

programs supported by agencies other than DOE, such as the U.S. Nuclear Regulatory Commission, the U.S. Department of State and even other DOE labs. This funding comes in throughout the year. In FY97, Work for Others is expected to remain at about the same \$46.5 million level that it was at in FY96.

It Ain't Over Till It's Over

Though the general level of the Lab's funding has been set for FY97, the final numbers are never in until the year is over. That's because BNL scientific staff, department chairs and the Lab Directorate are constantly working to increase the amount of DOE funding allocated to various research programs. Usually, said Melucci, these efforts meet with some success, although the status of some programs

power plants. The techniques selected for study will measure chemical, physical and electrical properties of the cables. ETD also developed a quality-assurance program for this project that meets very stringent federal guidelines. The program ensures that all personnel are trained and certified to perform their tasks, tests are standardized, and all test results are properly documented and traceable. This newly developed plan is based on the quality-assurance requirements im-

Natural Gas (cont'd.)

Further, burning gas will reduce some costs involving environmental concerns. "Whatever fuel is burned to heat a building, some by-products are emitted," explained Toscano. "We are able to comply with state and federal air emission regulations when using oil. But gas emits no sulfur dioxide and emits smaller amounts of oxides of nitrogen and particulates than oil does. So, in using gas, it will be less expensive to ensure that BNL maintains its record for clean burning." Yet another advantage that Toscano foresees is that, once gas is on site, it could be feasible to use natural gas-powered vehicles, with the addition of a natural gas vehicle refueling station. Planning and negotiations for the contract, which took place over the last three years, were initiated by PE's

BNL has almost 3,200 employees, many of whom have friends or relatives who could also give blood at BNL's Blood Drive. Some people cannot give blood for health reasons, but most are fully eligible. If everyone who is eligible were to give, what a silver jubilee that would be! If you're hesitant to donate blood for any reason, try talking it over with Susan Foster, Human Resources Division, Ext. 2888, who organizes BNL's Blood Drive, or your department or division's Blood Drive captain (call Foster if you do not know who this is). They can reaffirm how easy and painless it is for people to give blood, and how simple it is to make your trip to the Blood Drive count twice — by becoming part of the National Marrow Donor Program, a national registry to help all people with fatal blood diseases, but which is particularly short of registrants who are African-American, Asian/Pacific Islander, Hispanic or Native American. To sign up for the bone marrow registry or the Blood Drive, complete and return the pledge card all employees should receive today.

may be doubtful for long periods. As a multiprogram laboratory, BNL receives funding from many parts of DOE and numerous other federal and non-federal sources. The Lab is organized around this programmatic diversity. A significant part of the Lab is also in the process of moving from construction-oriented activities toward the operation of RHIC, and, Melucci pointed out, these differences can result in one area of the Lab growing while another is shrinking. "Everyone works hard at resolving these differences all year long," said Melucci, "because we want to get through each year losing the fewest possible jobs, while continuing to operate our big machines and to do the forefront research for which Brookhaven is so well known." — Anita Cohen

posed on commercial nuclear power plants in the U.S., and supplements BNL's standard quality-assurance plan. In addition, ETD organized two public meetings at NRC headquarters in Rockville, Maryland, to gain input from the public and industry on the issues that need to be resolved in this testing program. One meeting was held before the program started in 1993, and another on August 6-7 of this year. The testing program is expected to be completed in 1998. — Diane Greenberg

Greg Flett and involved Bebon, PE Manager Bruce Medaris, PE Deputy Manager Ed Murphy and Toscano for BNL. Representing DOE were Mike Butler, Mike Senitta and Joan Shands of DOE's Brookhaven Group Office. "It's important to point out that this whole project has been made possible by DOE's In-House Energy Management Program," stated Toscano. "Without the \$1.2 million construction funding we obtained from the program in 1995 to convert BNL's boilers to either natural gas or oil use, our plans could not have materialized. "This DOE program has been vital to energy management efforts at BNL, as well as at other DOE facilities," Toscano emphasized. "Through DOE funding since 1985, we have successfully completed projects that have reduced our annual building energy usage by 18 percent, saving millions of dollars and benefiting the environment." — Liz Seubert

Mona Vitale, who spent 22 years at BNL, died on October 27. She was 70 years old. Having joined the Physics Department on July 15, 1963, as a scanner, she was a principal technician when she transferred to the Alternating Gradient Synchrotron Department, in October 1981, as a technical specialist, the position she held until her retirement on February 28, 1986.

Holiday Parties: Time To Reserve

Recreation Building

Lab organizations and BERA activity groups interested in reserving the Recreation Building in the apartment area for holiday parties may send a representative to a meeting Wednesday, November 13, at 11:30 a.m., in the conference room of the Human Resources Division, Bldg. 185A.

As in past years, reservations will be made in the order determined by a lottery held for those at the meeting. While dates are available, subsequent reservations may be made through Wednesday, November 27, by contacting the Recreation Office, Ext. 2873.

Brookhaven Center

For reservations for parties at the Brookhaven Center, call Christine Ronick, Staff Services Division, Ext. 3545.

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 Human Resources Division lists new placement notices, first, to give employees an opportunity to request consideration for themselves through Human Resources, 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 (344-7744), for a complete listing of all openings.

Current job openings can also be accessed via the BNL Home Page on the World Wide Web. Outside users should open "http://www.bnl.gov/bnl.html", then, under "Information," select "Jobs." For scientific staff openings, select "Scientific Personnel Openings"; for all other vacancies, select "General Personnel Openings."

SCIENTIFIC RECRUITMENT - Doctorate usually required. Candidates may apply directly to the department representative named.

POSTDOCTORAL RESEARCH ASSOCIATE(S) - Trained in physics with experience in the theory of nucleus-nucleus collisions at ultrarelativistic energies, to join the Nuclear Theory Group in the Physics Department. The group has active programs in the physics of relativistic nucleus-nucleus collisions of RHIC collider energies. Contact: Sidney Kahana, Physics Department.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

DD 0590, TECHNICAL POSITION - (term appointment) Requires an AAS in electrical technology or equivalent, skills in soldering and other wiring techniques. Experience in prototype analog and digital circuit and chassis construction, and safe handling of small power tools is also required. Experience with electronic test instruments, high-current power supplies and computers is desirable. Will work from electronic schematics, verbal instructions and rough sketches in building complex analog and digital equipment. RHIC Project.

DD 0568 PROGRAMMER/ANALYST POSITION - (term appointment) Requires a BS in computer science or significant experience working in a program development environment. Knowledge of UNIX development environment, including file organization, make utility, archive libraries and source-code management systems (RCS) required. Scripting languages skills such as C, Shell and/or Perl are also required, as are strong organization and writing skills. Knowledge of HTML desired. Will support code organization, development, release, testing and documentation in the RHIC/AGS Controls Group. (reposting) RHIC Project.

Note to Diners

The Laboratory will be closed on Monday, November 11, in observance of Veterans Day, and the Cafeteria will be open on that day only from 9 a.m. to 2 p.m. The Tap Room at the Brookhaven Center will be closed on Sunday, November 10, then will re-open from 5 to 9 p.m. on Monday.

Cooking Exchange

The Hospitality Committee invites on-site residents and their friends to the next meeting of the Cooking Exchange, on Thursday, November 14, from noon to 1:30 in the Recreation Building.

Participants should bring a favorite dish to share, as well as an appetite to sample culinary delights from around the world. For more information, call Vicky Chang, Ext. 1064.

Volleyball

Standings as of November 1

Open League		League I	
Shank, Carry & Throw	11-1	Bikers 'n Spikers	7-2
Death Volley	5-4	Rude Dogs	9-3
Pass, Set & Crush	5-4	Scared Hitless	5-4
Far Side	4-8	Net(e)scapers	3-9
Spikers	2-10	Set to Kill	3-9
League II		League III	
Spiked Jello	9-0	Silver Bullets	9-0
Safe Sets	6-0	Upton Ups	9-0
Jao-About-That	5-4	Group Sets	6-3
Lift, Carry, Throw	4-5	Just 4 Fun	6-3
Nuts & Bolts	4-5	New Comers	3-6
Fossils	4-2	OER	3-6
Monday Nite Live!	2-4	Court Hogs	0-9
Jolly Vollies	1-8	Over-in-Three	0-9
Night Court	1-8		

Rifle & Pistol Club

The Rifle & Pistol Club meets on the second Wednesday of each month, so the next meeting is November 13, in Room 202, Bldg. 911B, at noon. For more information, call Otto Jacobi, club president, Ext. 3471.

Arrivals & Departures

Arrivals	
None	Departures
This list includes all employees who have terminated from the Lab, including retirees:	
Philip K. Allen	Info. Services
Xihong Bai	Biology
Kimberly J. Boomer	Medical
William H. Dieffenbach	Physics
Maureen Dunn	Applied Science
Thomas T. Nguyen	Physics
Csaba Szeles	Physics