

PPPL Signs Contracts with U.S. Businesses

Design of TPX Components Moves Forward

During a ceremony punctuated by much applause, PPPL signed contracts totaling \$34.3 million with two teams of American companies on June 9. The contracts mark a milestone in the next stage of fusion research, as well as an effort to nurture the development of fusion technology in U.S. industry.

"This is an important day for the Tokamak Physics Experiment (TPX), the Princeton Plasma Physics Laboratory, and the national fusion program," said PPPL Director Ronald Davidson at the signing ceremony. "It is an important day for the Laboratory because we have not been in the position of signing contracts, particularly contracts of this magnitude, since the time of TFTR

construction in the late 1970's. It is also an important day for TPX, since it marks the beginning of a large industrial involvement in this important national project."

Flanked by U.S. and Department of Energy (DOE) flags, Davidson joined David Overskei, Senior Vice President of General Atomics, and Robert Iotti, Vice President of Nuclear Services and Advanced Technology, the Ebasco Division of Raytheon Engineers and Constructors, Inc., in the contract signing at the Lab. Also on hand were representatives from McDonnell Douglas Corporation and the Rocketdyne Division of

Continued on page 2

DMAC Hosts Speakers

As messengers of an important Princeton University initiative, two guest speakers at PPPL relayed a key goal of the University: Princeton is committed to diversity and community in all areas.

"Our common goal is that we all see the value of diversity and learn how to work together effectively," said Joann Mitchell, Associate Provost and Affirmative Action Officer at the University.

Mitchell and Wilbur Hicks, the University's Ombudsperson, were the featured speakers during a May 11, Lab-wide, open meeting sponsored by The Director's Minority Advisory Committee (DMAC).

Diversity and Community

Mitchell, who is charged with, among other things, enhancing race relations on campus, said University President Harold Shapiro recently issued a Statement on Diversity and Community, which was mailed to all department heads and deans. (President Shapiro's statement in full is included in this issue of **HOTLINE**). The President received advice regarding the statement from several advisory groups, such as the President's Council on which Laboratory Director Ronald Davidson serves.

"We remain unwavering in our commitment to both diversity and

Continued on page 4



Lab Director Ronald Davidson (middle) clasps hands with industrial partners David Overskei (left), of GA, and Robert Iotti, of Raytheon, after the contract signings.

Contracts

Continued from page 1

Rockwell International Corporation, which are the other companies that make up the teams, as well as DOE officials and PPPL staff.

Leading Laboratory

In his remarks during the contract signing ceremony, Overskei called PPPL the "leading Laboratory in the United States." He added, "It is a pleasure for us to be in a position where we are accepted as an industrial provider of technology by the leading plasma physics laboratory—the leading fusion research institution in the U.S. ... This is probably the best team with regards to plasma physics technology in the world."

The agreements are for the design of components of the TPX. General Atomics, teamed with McDonnell Douglas Corporation, the Rocketdyne Division of Rockwell International Corporation, and the Ebasco Division of Raytheon Engineers and Constructors, Inc., was awarded \$26 million to design the plasma facing components, which will be made of carbon materials and will protect the vacuum vessel from high heat flux and hydrogen embrittlement. The Ebasco Division of Raytheon Engineers and Constructors, Inc., teamed with McDonnell Douglas Corporation and General Atomics, was awarded \$8.3 million to design a double-walled, titanium vacuum vessel.

Full Partner

"One of the goals of the TPX Project is to involve U.S. industry as a full partner in the design and fabrication of this experimental device," said Rodney Templon, of the Laboratory's Procurement Division. "This project is a way of keeping U.S. industry interested in the fu-



The Lab's business partners for the design of TPX components are, from left, Robert Iotti, Vice President of Nuclear Services and Advanced Technology, the Ebasco Division of Raytheon Engineers and Constructors, Inc.; James Yuen, Advanced Materials Manager at the Rocketdyne Division of Rockwell International Corporation; John Davis, Manager of High Energy Systems at McDonnell Douglas Corporation; and David Overskei, Senior Vice President of General Atomics.

sion energy program, with the thrust being to foster and maintain fusion technology in the United States' private sector."

"This is probably the best team with regards to plasma physics technology in the world."

—David Overskei—

The Tokamak Physics Experiment is a national project to develop a continuously operating, compact, economical fusion reactor. Said PPPL Director Davidson, "Instead of the one-second pulses of power produced recently in the TFTR, the TPX is designed to operate continuously. Record-setting as those TFTR pulses were, the fusion program

must start looking ahead to continuous operation."

The design and construction of TPX, which is proposed by President Clinton and will be located at PPPL, is being led by a team of physicists and engineers from national laboratories, high-tech industry, and universities across the United States. The first plasma experiments on TPX, which will replace the TFTR, are scheduled for the year 2000.

Philip Heitzenroeder, the TPX Vacuum Vessel Systems Manager at PPPL, and Templon noted that the industry team members will become part of the TPX Project team. "Both will participate with national Department of Energy Labs who have responsibility for various TPX components. They will be expected to interact with each other and with

Continued on page 3

Contracts

Continued from page 2

all the other Project participants," said Templon.

Advantages

Pointing out the advantages of involving private industry in the TPX Project, Templon and Heitzenroeder said PPPL will be exposed to new ideas while tapping into industry's expertise in materials and manufacturing. "There's a wealth of very applicable industrial experience in high-tech businesses that complements the plasma physics and fusion orientation of the project. Besides, it is not economically feasible to hire expertise or

develop facilities here that are needed for a short time," said Heitzenroeder.

He added that the companies will also benefit from their interac-

"This project is a way of keeping United States industry interested in the fusion energy program, with the thrust being to foster and maintain fusion technology in the U.S. private sector."

—Rodney Templon—

tion with the TPX team. "In addition to exchanging knowledge with us, industrial involvement in the Project helps transfer fusion technology to industry," he said.

The vacuum vessel and plasma facing components teams are expected to begin arriving at the Laboratory this month to begin work that will take two to three years.

John Schmidt, TPX Project Director, said, "The vacuum vessel and plasma facing components contractors are companies that we worked with on tokamak design activities during the last several years and they have performed very well. The total value of these contracts is several million below our baseline (conceptual design) estimate. Controlling the cost of these activities will be a priority during the execution of these contracts."

Cooperation and Hard Work

Greg Pitonak, Department of Energy Project Manager for TPX, lauded the joining of industry with the Laboratory. Said Pitonak, "We could not have achieved these important milestones without large amounts of cooperation and hard work by the TPX Project team at PPPL, our new industrial subcontractors, and the various Department of Energy participants. I'm confident that, with continued support from Congress, we can keep our momentum and continue to meet project objectives on time and within budget." ●



Department of Energy and PPPL employees celebrate the contract signings. From left are Greg Pitonak, DOE Project Manager for TPX, Sharon Warkala, of PPPL's Procurement Division, and Robin Bauer, a contract specialist with the DOE's Princeton Area Office.

HOTLINE

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community in a context of academic excellence," said Shapiro in the memorandum that is also being released to all employees.

The memo is the result of the Race Relations Working Group, which produced a comprehensive report on race relations at the University last spring. This spring, the group, of which Mitchell is Chairperson, produced an update to the analysis and Shapiro issued the statement to respond to a recommendation in the report.

Mitchell said the group's report focused on issues, priorities, and progress in implementing ideas. "The two of us are the embodiment of some of the recommendations," said Mitchell, indicating herself and Hicks. The group had recommended creating an Office of the Ombuds-person and restructuring the role of the Associate Provost.

Mitchell, who had been the director of the Affirmative Action Office at the University of Pennsylvania before coming to Princeton University eight months ago, characterized her role as a "strategist" and someone who tries to solve problems.

Everyone's Issues

"One of the things I was really excited about in this position is that it offered an opportunity to combine issues of race, gender, difference, and diversity with more general responsibilities," said Mitchell, who is an attorney. "One important thing for all of us, no matter what our race or what our gender—and all of us have a gender and a race—is to sort out these issues and concerns and try to see them as everyone's issues and concerns and not simply those of people of color and those of women."

A Message from the President

Princeton University is a community devoted to learning. We actively seek students, faculty, and staff of exceptional ability and promise who share in our commitment to excellence in teaching and scholarship, and who will bring a diversity of viewpoints and cultures. By incorporating a broad range of human experiences and a rich variety of human perspectives, we enlarge our capacity for learning, enrich the quality and texture of campus life, and better prepare for life and leadership in a pluralistic society.



As a community, we respect the dignity, individuality, and freedom of each member. At the same time, we strive to be a place where individuals and groups learn with and from each other. We aim to foster a sense of shared experience and common purpose, along with a collective responsibility for each other's well-being and for the well-being of the University as a whole.

Although we acknowledge the difficulties inherent in creating a community of individuals who are different from each other, we remain unwavering in our commitment to both diversity and community in a context of academic excellence. We seek to enable all members of this community to pursue their educational, scholarly, and career interests in an environment that recognizes both the distinctiveness of each person's experience and the common humanity that unites us all, and permits us to take full educational advantage of the variety of talents, backgrounds, and perspectives of those who live and work here.

**—Princeton University President Harold Shapiro
from his "Statement on Diversity and Community"**

Mitchell said one accomplishment of the group was crafting the statement that has been issued as a memorandum from Princeton's President Shapiro. She said the statement reflects the hopes of the group—and the University—for creating diversity and community at the institution. "It sort of sets the standard for saying this is what our expectation is of how we are going to work together," she added.

The Associate Provost noted that the group also focused on how managers and leaders for the University are trained, as well as on recruitment efforts and initiatives. She said the numbers and percentages of

women and people of color in certain areas of the organization are not what statistics have indicated they should be.

"One of the programs that was recently announced by the President and Provost is designed to increase the pool of women and people of color in mid- and upper-level management positions. We are hoping that in the fall of this year we'll have two to five interns or administrative associates who are going to work with us for a year to enhance their skills, as well as create diversity in our workforce. At some point

Continued on page 5

DMAC

Continued from page 4

in our future we may be able to recruit some of these individuals to work here and if not, they will have enhanced employment opportunities elsewhere," said Mitchell.

Proactive Steps

"We are taking proactive steps to make sure that our workforce begins to reflect the diversity that statistics and demographers tell us is a reality," said the Associate Provost. The program thus far is for people outside of the University but officials hope to have a similar program for staff to enhance skills and overcome barriers to advancement.

Hicks, who is the first Ombuds-person at the University, described his occupation as a "complaint handler," a "troubleshooter," and a "fire putter out."

"One of the goals of an Ombuds-person is to solve problems quickly before they escalate," said Hicks, whose office is at 179 Nassau Street in Princeton. He said the Ombuds-person at Princeton solves any general problems that exist at the Uni-

versity, especially in the workplace, as well as problems that include racial components.

"We need to have a way to communicate effectively about those things that are working well and those things that are not working so well."

—Joann Mitchell—

"I respond to problems that result as the consequence of someone or something happening that's inappropriate and is based on a person's background—nationality, race, gender, sexual orientation, or disability," said Hicks, who has a bachelor's degree from Fisk University in Nashville, master's degrees from Harvard University and Johns Hopkins University and a law degree from the University of Maryland. He added that his Office is a place for people to come when they don't know where else to go. It is also a confidential resource.

Hicks, who was Assistant Vice President at the University of Maryland, Baltimore County, prior to coming to Princeton, noted that his office is a good place to start when a problem arises. Most just want a place to talk about a problem. Some want a particular behavior such as sexual harassment to stop, while others wish to file a grievance and need to know their options. He said the University has a policy and a protocol for dealing with problems involving race and ethnicity.

Dialogue with Staff

Hicks and Mitchell, whose services are available to Lab staff since PPPL is part of the University, also took part in a question-and-answer session. Mitchell said dialogue with staff is the best way to create a partnership that allows Princeton to be the best University.

"We need to have a way to communicate effectively about those things that are working well and those things that are not working so well," she said.

Hicks' number is (609) 258-1775 and Mitchell's is (609) 258-6110.

Lab's McCune Joins Cyclists on 500-Mile Charity Ride

When PPPL computational scientist Doug McCune heard that 175 bicyclists would be cycling from North Carolina to Quakerbridge Mall, he jumped at the chance to line up his wheels alongside them.

"I've been a bike enthusiast for years," said McCune, who banks more than 100 miles a week on his blue Schwinn touring bike.

The group of cyclists, who will be departing Roanoke Rapids, N.C., on July 9, are riding to raise money for Anchor House, a shelter for troubled children in Mercer County. McCune found out about the charity ride, which is the 16th Annual Ride for Runaways, from some bi-

Continued on page 6



Doug McCune

Cyclist

Continued from page 5

cycling acquaintances. He said the bicycling trip satisfies two needs—his enthusiasm for bicycling and his wish to contribute to charitable causes.

Bikes to Lab

"My interest in riding came together with their (Anchor House's) excellent program. I'm really happy that they have this ride," said McCune, who often bikes to the Lab from his Princeton home.

McCune said he has been training for the one-week trip by tackling the Sourland Mountains in Montgomery Township and heading off once a week for 50-mile rides. The Sourland Mountains are especially good for hill training, he noted.

Getting ready for such a trip takes all spring, said McCune, who does not ride during the winter months. This year, he began turning his wheels in March.

McCune, who prefers touring rather than racing, has taken several long-distance trips since he took up cycling in 1981. His treks on two wheels have ranged from several one-day trips—many to the Jersey Shore—to a 10-day trip that included biking to Montauk, Long Island, and taking a ferry to Connecticut.

"I enjoy taking in the scenery and touring with my bike. You really see some things that you would never see if you travel by car."

—Doug McCune—

"This is the first long group ride taking multiple days," said McCune of his upcoming trip, which will also be his first ride for a charitable cause. He said he always carries a lot of water, especially in the summertime, wears a helmet, stays alert, and paces himself. "The important

thing is to travel safely and comfortably," he said.

The charity cyclists will ride 70 to 80 miles each day to finish the 500-mile trip, staying at motels along the way. McCune said he was pleased to find out that the group's luggage will be transported for them. He recalled carrying 40 pounds worth of camping equipment while biking across the Palisades on an earlier biking expedition.

Sense of Accomplishment

McCune said he really feels good after a ride. The bicycling gives him a sense of accomplishment while allowing him to see the sights. "I enjoy taking in the scenery and touring with my bike. You really see some things that you would never see if you travel by car," he said.

Anyone interested in finding out more about the Anchor House ride can call McCune at Ext. 2731 or e-mail him at dmccune@pppl.gov.

What's Happening at PPPL?



Russell Hulse recently received the highest alumni science honor from his alma mater, Cooper Union. Hulse, a 1993 Nobel Prize winner, was awarded the 1994 Gano Dunn Award for outstanding professional achievement in science during Cooper's Founder's Day celebration in April.

Secretaries' Briefing Held via Satellite Seminar



PPPL's staff participated in the American Management Association's (AMA) 7th Annual Secretaries Briefing, which took place through a satellite seminar in the Lab's Auditorium. The seminar, which was held on April 27, was in honor of Professional Secretaries Day. Some of the attendees, from left to right, beginning with the front row and moving back, row by row, are Athene Kan and Teresa Chapman; Verna Weyman; Gloria Pollitt, Dolores Bergmann, and Elizabeth (Betty) Carey; Joanne Bianco, Charlene Totaro, and Jeanne Salerno.