

PPPL, Princeton, DOE Sign Agreement



DOE Princeton Site Office Manager Maria Dikeakos (center) meets with Princeton University Dean for Research A.J. Stewart Smith (left) and PPPL Director Stewart Prager (right) on Monday, April 16, to sign a new Partnership Commitment between the Site Office, Princeton University, and PPPL's management team. The document is designed to complement the contract that already exists between DOE and Princeton to manage PPPL by clarifying the roles and responsibilities among the parties and promoting a productive relationship. It replaces an earlier document. The agreement memorializes existing commitments among the partners to manage their operations effectively in a manner that fulfills the Laboratory's scientific mission while at the same time acknowledging that each partner has a distinctive role that is respected by others in fulfillment of that mission.

Guest Corner

Earth Day 2012 – Think Green



By **Rob Sheneman** - Head, Materiel & Environmental Services, PPPL ESH&S

On Tuesday, April 24, the Laboratory will celebrate Earth Day with vendor displays, a guest speaker and the presentation of our annual Green Machine Awards. This year's Green Machine Awards recognize individuals and employee teams who have significantly contributed to PPPL's environmental performance over the past year. They have saved energy, reduced waste and encouraged sustainable work practices. Indeed, we have lots to celebrate this year.

A significant recent event was the certification of our Environmental Management System (EMS) to the international management standard known as ISO 14001: 2004. The certification of our EMS against the ISO 14001:2004 standard is a significant accomplishment that involved a series of audits by independent experts who conducted extensive reviews of policies, plans, procedures, and records. They interviewed employees from throughout the Laboratory and evaluated our environmental programs and performance.

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INCIDENT UPDATE

Dear PPPL'ers,
As you may know, several teams of Lab staff-ers have been working very diligently to investigate the causes of an accident that occurred on March 8 in which an employee was seriously injured while operating an apparatus to dig holes on the PPPL campus. Safety is of primary concern here and we are looking closely at the incident to learn precisely what happened and why, and how we can improve.
As a result of those inquiries, some finished and some continuing, we are going to be reporting back to you our results and plans of actions, many of which will require your input. Please know we are doing everything we can to understand this so that every worker here is safe and is able to contribute to his or her own and everyone's safety. If you have concerns or suggestions, please remember that my door is always open to you or feel free to submit suggestions through the [Suggestion Box for Director link](#) on our intranet.

Stewart C. Prager

At PPPL THIS WEEK

MONDAY, APRIL 23

Special Theory Seminar
10:45 a.m. - Noon ♦ T169

TUESDAY, APRIL 24

Earth Day Celebration
10:45 a.m. - 1:30 p.m. ♦ LSB Lobby
[FULL PROGRAM ON PAGE 5](#)

WEDNESDAY, APRIL 25

PPPL Colloquium
4:15 p.m. ♦ M.B. Gottlieb Auditorium
Semiconductor Devices Inspired by
and Integrated with Biology
John Rogers (University of Illinois)
[CLICK HERE FOR ABSTRACT](#)

THURSDAY, APRIL 26

Special Theory Seminar
10:45 a.m. - Noon ♦ T169

FRIDAY, APRIL 27

DIII-D Science Meeting
1 p.m. ♦ B-233

PPPL Receives Prestigious Certification for Environmental Management Systems

By Patti Wieser

In recognition of its sustainable best business practices and environmental performance, PPPL has received certification to the international standard known as ISO 14001. This standard establishes the requirements for environmental management systems, which allows organizations to evaluate and control the environmental impact of their activities.

The certification is cause for celebration as PPPL observes Earth Day on April 24 (see page 5 for a listing of Lab activities).

"We are delighted to receive this certification by the International Organization for Standards or ISO," said Rob Sheneman, Deputy Head of Environment, Safety, Health & Security at PPPL. "The ISO 14001 structure of standards enables us to identify our environmental aspects and impacts, minimize negative impacts, comply with regulations, and develop a process for continuous improvement." Environmental aspects relate to how an organization interacts with the environment and impacts how the organization affects or changes the environment.

Sheneman, who is also the Lab's Environmental Management System program manager, described as "evolutionary" the two-year process for modifying or expanding existing systems to meet the specific requirements of the standard. "Most of the standards were not new to us. We had existing tools and systems in place for environmental performance," he said. "When we started this process it was not to build something new, but to integrate it with how we were already doing business." Sheneman praised PPPL's excellent culture of compliance and continuous improvement, adding that PPPL adopted the 14001 as a framework for the process.

The Laboratory pursued the certification as part of the Princeton University contract with the Department of Energy, as well as in response to Presidential Executive Order for Federal agencies and contractors. "We're in good company. The majority of DOE labs have registered or certified to standard over the past few years," Sheneman said.

Auditors for the certification conducted a preliminary review at PPPL in October, followed by a formal review in December, and culminating in certification earlier this year. "It's a very intensive process. The management systems must include a number of different elements, the senior management and policies must support the system, and processes and procedures must be in place," Sheneman said.

Examples of processes and procedures in the regulation area include monitoring air and water emissions. Environmental impact examples include improvements such as cutting energy use or adding landscaping. "We need a formal process for determining the impacts and aspects," said Sheneman. "We must establish performance goals and have a way to measure and track our performance against them. The standard also requires us to have in place processes and procedures for identifying and correcting problems, improving systems, and checking our performance."

Sheneman noted that many projects have been executed at PPPL to save energy and thus money, but they also serve to reduce the environmental footprint of the Laboratory, particularly by cutting greenhouse gas (GHG) emissions. "We try to expand the perspective of the Lab's environmental impact — whether on the disposal side or the use side," he said. "Environmental performance goals have caused us to change the way we evaluate certain projects, particularly around energy since the way we use energy and trim GHG emissions are significant in environmental performance."

He noted that the Laboratory's continued emphasis on building performance has led to using less than half the amount of energy per square foot than in 2004.

"The larger perspective is how the organization affects the environment and how to consider the environment when doing business and making decisions," Sheneman said. "There are many facets to the Lab's operations. Many little changes add up — from composting cafeteria waste to purchasing recycled-content carpet to installing energy efficient lighting." 🌱

Think Green continued from page 1

While the registration of our EMS is an accomplishment that should be applauded, ultimately the goal is to improve our environmental performance and to minimize our impacts on the environment. The Laboratory has many accomplishments in this area to be proud of. For example:

- On average, PPPL's non-experimental buildings use less than half of the energy per square foot of space than they did in 2004.
- We have cut the Laboratory's emission of climate-warming greenhouse gases by over 50 percent in just three years.
- Our vehicle fleet uses 62 percent less petroleum fuel today than it did in 2005.
- The removal and recycling of the C-Site MG systems generated approximately \$1 million in revenue from scrap metal sales, which will be reinvested at PPPL.
- We recycled over 57 percent of office waste and began the full-scale composting of food and cafeteria waste.

- We received an award from DOE for our use of fleet biofuels and awards from DOE and EPA for our reuse and recycling of electronic equipment.
- We received a DOE Secretary Achievement Award for the management of sulfur hexafluoride, a major green house gas, and our contributions to DOE's Fugitive Emissions Working Group. This Friday, Laboratory representatives will attend the US EPA Region 2 Environmental Quality Awards ceremony in New York City to accept a Gold-level award from EPA's Waste-Wise program for our re-use and recycling of electronic equipment.

In our quest to make fusion energy a reality, PPPL is also demonstrating how large-scale research can be conducted in a more environmentally friendly manner.

Additional info is available from the "Environmental Management System" link on the PPPL employee home page. We invite your ideas and suggestions on how to continually improve the Laboratory's environmental performance. Please submit comments to rsheneman@pppl.gov. 🌱

Dear PPPL'ers,

Princeton University announced earlier this week the good news that a new University position has been established — the Vice President for PPPL — and that Stew Smith will assume that position. These changes are outstanding news for PPPL. At present, Stew oversees PPPL for the University as part of his wide-ranging responsibilities as Dean for Research. The purpose of the new position is to assure dedicated oversight of PPPL by the university. The holder of the new University Vice President position reports to the President of Princeton University. The PPPL organizational structure is unchanged. The added focus indicates the importance of PPPL to the University. Stew Smith is amazingly effective at improving the well-being of PPPL, and the change will make a terrific oversight situation even better.

— Stewart Prager

Smith To Be Named VP for PPPL

By Eric Quiñones

AJ. Stewart Smith, who has served as Princeton University's first dean for research since 2006, will assume a newly created position as vice president for the U.S. Department of Energy's (DOE) Princeton Plasma Physics Laboratory (PPPL) to serve as the University's primary liaison with DOE.

Smith is expected to begin his new role on Jan. 1, 2013. A national search for his successor as dean for research will begin immediately.

During his tenure as dean, Smith has significantly enhanced Princeton's research enterprise by unifying and expanding the University's research administration operations, which has helped to attract increased funding from governments, corporations and other sources.

The move will enable Smith, who currently oversees PPPL as dean, to dedicate more time to the Lab, which the University has managed for more than 60 years. In turn, his successor will be able to focus on other areas of the dean's portfolio that have grown during Smith's tenure, including corporate and foundation relations, technology licensing, and regulatory compliance.

"Stew Smith has done a terrific job and really has built this position to take us into the 21st century in terms of our research support functions," said Princeton President Shirley M. Tilghman. "Stew has been a great advocate for research at the University and will continue to be in his new role. Through his exceptional service to Princeton as the founding dean for research, he leaves a strong platform for his successor."

"We welcome this change, which will enable Stew Smith, with his understanding of physics research and his long experience of working with DOE, to devote his efforts to PPPL," said William F. Brinkman, Director of DOE's Office of Science, which oversees the laboratory for DOE. "He is a great choice to help guide PPPL through scientific and economic challenges as its researchers continue to work toward the goal of producing fusion energy."

Smith, who is Princeton's Class of 1909 Professor of Physics, is a leading researcher in high-energy particle physics and a

nationally known figure in science policy. He was appointed chair of the University Research Board in 2005 and a year later assumed the new role of dean for research, beginning a major restructuring of Princeton's research administration.

As dean, Smith took on oversight of several key research support functions that had been dispersed throughout the University, including the Office of Corporate and Foundation Relations, the Office of Research and Project Administration, the Office of Technology Licensing, PPPL, and the University's animal research, biosafety and research integrity programs.

The transition in Smith's role comes as both PPPL and the University face ongoing challenges in attracting research funding from governments, corporation and foundations in the current economic climate, Provost Christopher Eisgruber said.

"Supporting the research conducted at PPPL is very important to us, as is our relationship with the Department of Energy, so we are delighted that Stew can devote his time to these responsibilities," Eisgruber said. "We have been very fortunate to have in Stew someone who had the expertise and talent to lead the University's research enterprise and also to provide effective oversight of PPPL."

"One of the principal areas of emphasis for the next dean for research will be expanding corporate and foundation partnerships, and improving our already very strong competitiveness for government grants," Eisgruber said. "Stew has made tremendous progress in those areas already. By moving responsibility for PPPL into his new office, the University ensures that his successor will both be able to take on existing management



A.J. Stewart Smith

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Smith Named VP

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and oversight responsibilities, and also cultivate new initiatives that will help Princeton's research program to secure the funding that it requires."

Smith said that his new role in focusing on PPPL is particularly important as the American fusion research community contends with domestic budgetary challenges, as well as U.S. commitments to support a major international fusion energy project known as ITER.

Smith noted that research at PPPL is at an exciting stage with the recent approval of funds for a significant upgrade of the lab's major test facility, the National Spherical Torus Experiment, to pursue the development of nuclear fusion as a clean, safe and abundant fuel for generating electricity. At the same time, he wants to continue the trend of increasing collaborations between PPPL and University researchers on the frontiers of plasma physics.

"We have a beautiful new project going at PPPL with the upgrade of our flagship experiment," Smith said. "University oversight is going to be needed as much, if not more, as we move into the next phase of research at the lab."

PPPL Director Stewart Prager, who manages the lab and works closely with Smith, agreed: "A dedicated University position to oversee PPPL and facilitate links to other parts of the University is a wonderful idea, and there is no one who can better meet these challenges than Stew. This will maximize the benefits that PPPL derives from the considerable management expertise and scientific prowess within the University. It will also assure that the University benefits from strong scientific links to the lab."

Supporting the Research Community

Smith said he is proud of the enhancements to Princeton's research administration that have been accomplished during his tenure, particularly in assembling a strong senior management team within his office to oversee the multifaceted operations that support the efforts of the University's researchers.

In the 2011 fiscal year, Princeton and PPPL researchers conducted \$280.8 million in sponsored research, up from \$226.2 million in the 2005 fiscal year, the last year before Smith began his role as chair of the University Research Board.

"The rise in sponsored research speaks to the competitiveness of our researchers, but also to Stew's success in putting a good research structure in place," Eisgruber said. "He has appointed excellent people to his staff, and he has increased the funding that exists within the Office of the Dean for Research. Support for innovation, technology transfer and seed grants all have grown under Stew's leadership. He also has made important improvements to our compliance structures."

Smith cited the benefits of moving the Office of Corporate and Foundation Relations into his portfolio — more closely aligning its operations with partners in the Office of Technology Licensing and the Office of Research and Project Administration — as a key factor in bolstering support for Princeton researchers.

"It's very important to our faculty, who really want to make use of their intellectual property," Smith said. "Corporations are looking for the most important product we have, which is our people — new Ph.D.'s and postdocs who are trained here and have unique knowledge. They want people partnering in their research, so they can gain the expertise from us and also have a pipeline for their next generation of scientists and engineers. They also want to learn about interesting inventions and patents they might develop."


Princeton researchers also have benefited from increases in innovation funds during Smith's tenure, including: the Eric and Wendy Schmidt Transformative Technology Fund, which enables researchers to explore novel ideas that traditional funding sources might consider too risky to support; the Intellectual Property Development Fund, which supports early-stage projects that have the potential to transform lives and improve the world; and an endowed research fund that provides the dean with flexibility to support projects at various stages.

Also, in keeping with the University's efforts to enhance its international presence, Smith has worked to forge partnerships with institutions across the globe, including member organizations of Japan's National Institutes of Natural Sciences representing astrophysics, fusion science and biology.

Smith said the creation of his new position will enable his successor as dean to continue to advance these efforts, as well as foster the increasing interdisciplinary connections in Princeton's research community.

"The Princeton vision is to help the country and the world with new knowledge and new minds," he said. "When people have good ideas, you have to support them. We want to be the best at what we're doing and choose new things that would be the very best for us. That's what I hope the new dean will do — to use the time I have been using on PPPL to think about new directions and strengthening what we have."

The transition also will allow Smith to devote more attention to his own research, as he will dedicate 50 percent of his time to oversight of PPPL and 50 percent of his time to his research.

Smith joined the University faculty in 1967, a year after earning his Ph.D. in physics from Princeton in 1966. He served as chair of the physics department from 1990 to 1998. During his career, Smith has carried out a succession of major experiments in particle physics at U.S. national laboratories. Since 1995, he has served as scientific team leader of an international collaboration of 600 scientists from 10 countries involved in a project based at the Stanford Linear Accelerator. A fellow of the American Physical Society, Smith has been a member of the experiments committee for the Large Hadron Collider at CERN (the European Organization for Nuclear Research) in Geneva, and he has served on boards for many other organizations, including Brookhaven National Laboratory, the U.S. Department of Energy, the National Academy of Sciences and the National Research Council of Canada. In 2011, Smith was awarded the American Physical Society's W.K.H. Panofsky Prize in Experimental Particle Physics for his contributions to the field. 

courtesy of Princeton University Office of Communications

COLLOQUIUM

**Semiconductor Devices Inspired by
and Integrated with Biology**

JOHN ROGERS

University of Illinois

Wednesday, April 25

4:15 p.m. (Coffee/Tea at 4 p.m.)
M.B.G. Auditorium, Lyman Spitzer Building

**University Medical Center of Princeton at Plainsboro
OPEN HOUSE Saturday, May 12 • Noon to 6 p.m.**

1 Plainsboro Road, Plainsboro

*Tours of the New Facility
Info on Services and Programs
Kid's Activities and Games
Free Health Screenings
Refreshments*



TUESDAY, APRIL 24

EARTH DAY 2012

at PPPL - 9 a.m. to 1:30 p.m.

PROGRAM (MBG AUDITORIUM) AT 10:30 A.M.

"Welcoming Remarks" - *John DeLooper*

"PPPL's Sustainability Progress & the Future" - *Keith Rule*

"2011 PPPL Green Machine Awards" - *John DeLooper*

"Guest Speaker" - *Shana Weber, Ph.D., Princeton University
Sustainability Manager*

VISIT WITH VENDORS AND VIEW PPPL DISPLAYS IN THE LSB LOBBY FROM 10:30 A.M. TO 1:30 P.M. RAFFLES FOR BAGS, MUGS, AN LED-LIGHT BULB, AND CAFETERIA LUNCHES (\$8 VALUE).

TO CELEBRATE PPPL'S ISO 14001 REGISTRATION FOR OUR ENVIRONMENTAL MANAGEMENT SYSTEM, LOGO WATER BOTTLES WILL BE HANDED OUT IN THE LOBBY FROM NOON UNTIL 1:30 P.M.



V E N D O R S :

- Home Depot
- Unicor
- Legacy - Staples
- Kelly Janitorial Supplies
- Mercer County Improvement Authority
- Stony Brook Millstone Watershed
- Master Gardener
- PU Office of Sustainability Waste Management



PPPL Café Menu

BREAKFAST 7 a.m. - 10 a.m.
CONTINENTAL BREAKFAST 10 a.m. - 11:30 a.m.
LUNCH 11:30 p.m. - 1:30 p.m.
SNACK SERVICE until 2:30 p.m.

MONDAY, APRIL 23

TUESDAY, APRIL 24

WEDNESDAY, APRIL 25

THURSDAY, APRIL 26

FRIDAY, APRIL 27

**COMMAND PERFORMANCE
CHEF'S FEATURE**



**OLD ENGLISH STYLE
FISH AND CHIPS**



**CHICKEN PARMESAN
SERVED WITH PASTA**



**BLACKENED CHICKEN
CAESAR SALAD**



**CHICKEN WING STEW
OVER BROWN RICE**



**CLASSIC SHEPHERD'S
PIE**

**EARLY
RISER**

Pancakes with Sausage

2 Eggs any style, Choice of Meat, Potatoes and Toast

Pork Roll, Egg and Cheese on a Fresh Croissant

The XL Italian Omelet with Home Fries

Hash Brown, Egg and Cheese Wrap

**COUNTRY
KETTLE**

Turkey Barley

Loaded Potato

Black Bean with Ham

Seafood Chowder

Country Chicken and Vegetable

**GRILLE
SPECIAL**

Double Bacon Cheeseburger with Fries

Greek Chicken Steak with Onion Rings

Classic Tuna Melt with Fries

California Turkey Cheeseburger Hoagie with Fries

Grilled Turkey, Swiss and Tomato on Rye with Fries

**DELI
SPECIAL**

Grilled Italian Vegetable Wrap

Honey Mustard Chicken Salad on a Multi Grain Roll

Turkey, Avocado, Bacon and Cheddar

Jamaican Curry Chicken Salad Wrap

Grilled Chicken Caesar Wrap

PANINI

Crispy Chicken, Provolone, Balsamic Vinaigrette

Portobello, Provolone, Red Pepper and Tomato

Chicken Saltimbocca

Pepperoni, Provolone, Tomato and Peppers

Tofu Reuben

MENU SUBJECT TO CHANGE WITHOUT NOTICE

[CLICK HERE FOR A PRINTABLE WEEKLY MENU](#)

WEEKLY

Editor: **Patti Wieser** ♦ Copy Editor/Graphic Designer: **Gregory Czechowicz**
Photographer: **Elle Starkman** ♦ Webmaster: **Chris Cane**

PPPL WEEKLY is published by the PPPL Office of Communications on Mondays throughout the year except for holidays.

Deadline for calendar item submissions is noon on Thursday. Other stories should be submitted no later than noon on Wednesday.

Send to: pwieser@pppl.gov ♦ Comments: commteam@pppl.gov ♦ PPPL WEEKLY is archived on the web at: <http://www.pppl.gov/ppplweekly.cfm>