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Secretary of Energy Samuel Bodman Addresses SLAC Community

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Thank you, President Hennessy. I'm privileged and a bit in awe at being here before you. I've been on this job now about six months which—as my colleagues have heard me say a few times as we visited other laboratory facilities—it's beginning to be a little dangerous because I'm starting to think that I know what I am doing.

But the one thing we have been doing is working very hard with our friends in the Congress to get an Energy bill passed and I'm happy to report that I think America was the real winner last Friday when we did in fact get an Energy bill passed.

[See whole story...](#)



SPEAR3 Beam Lines Undergo Upgrades During Downtime

By Heather Rock Woods

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Dancing Atoms

By Monica Bobra

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Thank you, President Hennessy. I'm privileged and a bit in awe at being here before you. I've been on this job now about six months which—as my colleagues have heard me say a few times as we visited other laboratory facilities—it's beginning to be a little dangerous because I'm starting to think that I know what I am doing.

But the one thing we have been doing is working very hard with our friends in the Congress to get an Energy bill passed and I'm happy to report that I think America was the real winner last Friday when we did in fact get an Energy bill passed.

The President will sign it next Monday morning in Albuquerque out of deference to Chairman Domenici who led the Congressional effort to get the bill passed. It is not a perfect bill. It is frankly not the bill I would have written in every detail. But overall it's a terrific, I think, step forwards for our country and something that I am very pleased and proud to have supported. And I know the President feels the same way.

Now that we have passed that hurdle, I am focusing more intently on trying to understand better how the Department runs, getting to know as many people as possible at the various DOE facilities around the country. I have promised myself to visit every DOE facility in the complex by the end of this year. I think I'm going to make it—I've got four



*U.S. Secretary of Energy, Samuel Bodman, addressing the SLAC community.
(Photo by Diana Rogers)*

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or five left I believe.

I always worry when I say that. It's a little like Richard Nixon running against Kennedy. He made it to every state, I think that was his pledge, but he didn't seem to do too well in the election. I hope I am more successful in this endeavor than he was.

But the real objective here is to get to know the people of this Department and its various functions. And that's really why I'm here so I will be relatively brief in my comments and be happy to then take questions and comments from

any of you.

I understand there was supposed to be a session of the summer institute program going on right now and I appreciate your rescheduling and I appreciate the number of student participants who are here and attending this morning.

I should mention that my classmate and fraternity brother of many years—whom I haven't seen in 45 years—Bob Wagoner has served on the faculty here for many years. I had the fun of a reunion with him this morning and he was off to lecture to a group of students in a summer institute program right after our brief session this morning.

For more than 40 years, SLAC has been a leader in the design and the construction and operation of state-of-the-art electron accelerators. This is something you all know a lot about. It's also been working on experimental facilities for use in high energy physics as well as synchrotron radiation research.

If you think back through the list of people who have been the founders of this place: Panofsky, Bjorken, Drell, Taylor, Perl, Richter, Quinn, Addis, Prescott, Winick, Farkus, Kunz, Breidenbach, Arnold, Atwood, Dorfan, Seeman... and the list goes on. It's quite a list. It is arguably the most prolific group of scientists ever gathered together in one place at one time.

And I am in awe of the responsibility that I have in seeing to it that this extraordinarily prolific government-academic partnership moves forwards in an effective way. DOE is very proud of our relationship with Stanford and with the people who have founded this place. Now, those who founded the place are being asked to expand its role from high energy physics to increased work on photon physics. To a chemical engineer like myself that doesn't seem like a big change. But I am informed reliably that it's a little bit like getting Babe Ruth, Lou Gehrig, Mickey Mantle, Joe Di Maggio, etc. and having them coach a beach volleyball team. It's a lot to



*SLAC staff attending Bodman's address.
(Photo by Diana Rogers)*



*JoAnne Hewett (THP) asks Secretary Bodman a question.
(Photo by Diana Rogers)*



*Secretary Bodman receiving an honorary Beam Tree from SLAC Director Jonathan Dorfan.
(Photo by Diana Rogers)*

ask.

And I'm here secondly to thank the founders—not just for what they have done in the past, but for their ability and willingness to pitch in and help create the future of this laboratory which we will be very eager to support.

A little bit ago I had a chance to visit SPEAR3 and the Linac Coherent Light Source (LCLS) and I, of course, was very impressed. The LCLS is the world's first [hard] x-ray laser that will provide unparalleled insights into physics, astronomy, biology and other fields. The President talked about that a few minutes ago. And will offer a host of practical applications in medicine, nanotechnology, electronics and, of course, in energy—something that is near and dear to my heart.

I had a wonderful conversation with an industry user who was using the device to develop new drug applications for diseases that I'm sure will be crucial in the years ahead.

I was very pleased to hear that SPEAR3 passed a major milestone just a few weeks ago in its progress towards operating at full capacity. I found these world renowned facilities as well as the BABAR detector and the [particle] astrophysics presentation quite fascinating. Any curious person would be impressed and captivated by all this. But I am especially interested in it because of my own background. I am simply an engineer and have described myself as that in the past.

The Department's research facilities have special meaning for me. It is important in my view that if our economy is to be as productive and effective in the future as it is today—and as it has been for the last five decades—that we will have to maintain our leadership in science. This Department has a special responsibility for that. Private industry increasingly has had to reduce—or felt they've had to reduce—budgets in fundamental research that they were much more active in when I was a young person.

Today, to a large degree, it is the Federal Government that is the funder of this kind of research. Our Department—belying the name of the Department—is the primary funder of research in the physical sciences in the Federal Government. And I want you to know that I view that as a special responsibility, especially as someone that is trained as an engineer. I am a product of the research university environment. I was educated on an NSF fellowship—\$2200 a year—which was a lot of money in those days. It's been a long time.

I come from that environment and I believe in my heart that we will start to lose it if we start to give up our leadership position. And I fear that we have started. And I mean to help—working with Dr. Orbach and the leadership of this laboratory and our other national laboratories as well as the academic community—particularly the research academic community—who will see what we can do about helping.

Researchers from around the world come here from the DOE laboratories. There have been more than 80 Nobel Prizes that have been won by workers, by faculty and researchers at our labs. I think five of those laureates are [from work done] here at SLAC. That's something for you all to be very proud of. I know the people in the Energy Department are very proud of it.

But I am here to tell you that the challenges that our nation faces will only be met with the power that

comes from a science environment like this one. And I'm very proud of the central role that our Department plays.

Yet the truth is that no equipment, no building, no facility is as important as the people who do the work. And that is why, in closing, I wanted to make one last plea to all of you and that is issues related to safety.

Safety is a primary concern of mine. It frankly became as such when I managed a chemical company, which I did for the 15 years before I came to the government. We had 50 plants in 24 countries that ran 24 x 7, 330 days a year. And there was always a worry in those environments that someone would be hurt. And we worked very hard to prevent that.

I know that we had a serious accident last fall here and that there has been a renewed emphasis on safety here at SLAC. I implore you to work hard to see to it that there are no more accidents.

I would like you to know that, in my judgment, you—the people who work here and your colleagues at the other facilities of this Department around the country—are the most important assets that we have. Not the buildings, or the machines, or the technology. And I would implore you to look after one another. Because that's where it comes from.

That's all I have to say. I'm very happy and proud to be here and I'll be happy to take your questions. Thanks.

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Dancing Atoms

By Monica Bobra

An international community of over 250 engineers and users will gather for the 27th annual free-electron laser conference at from August 21 to 26 at the laser's birthplace—Stanford University.

In 1976, a group of scientists wanted to create the world's first free-electron laser, then a theoretically proposed instrument that required an intensely bright electron beam. They decided to alter the electron beam of the existing Stanford Superconducting Accelerator.

"We thought we'd try it just to see if it could be done," said Todd Smith, one of the scientists present on that eventful day. Though scientists now hope the world's first hard x-ray free-electron laser at the future LCLS at SLAC will revolutionize the fields of biology, chemistry, material science and atomic physics when it turns on in 2009, the impetus for the world's first ever free-electron laser was simply curiosity.

In a free-electron laser, a beam of electrons surf through magnets on electromagnetic waves. Both the magnets and waves act like fences, keeping the electron jostling along a specific path at near-light speeds. As the electrons bump their way through this ocean of waves, they emit photons—small bundles of light at specific energies. The numerous photons are collected and focused, forming the light of a laser.

Operating a Free-Electron Laser is advantageous because its light is tunable, like a dial tunes a radio. Run different bunches of electrons through these magnets, and the electrons will emit photons of different energies. Together, these photons supply the laser's light.

In conventional lasers, atoms sit inside a substance called a lasing medium, like a chocolate chips in cookie dough. Many different lasing media are present in modern-day lasers; for example, some use glass or silicon. Applied electrical discharges or bursts of light surge through the medium and excite the atoms, which then release photons. The energy of the photon depends on the type of atom. For example, argon lasers only produce certain wavelengths of visible light; carbon dioxide lasers produce specific wavelengths of infrared light. Free-electron lasers, however, can produce larger ranges of light—the trick, however, lies in manipulating electron bunches.

The group of six Stanford scientists successfully created the first free-electron laser, which operated at infrared wavelengths between approximately 1.5 and 7 microns. Soon after, chemists like Michael Fayer, now the director of the Fayer Research Group at Stanford University, "were pretty excited about

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it—there was a lot of scientific interest,” said Smith.

In one of Fayer’s first experiments with the newfound laser, he analyzed protein dynamics. Proteins are constantly moving, allowing them to execute biological tasks. Using the protein myoglobin bound to carbon monoxide, he analyzed how the protein’s motions caused the carbon monoxide to vibrate. The free-electron laser acts like a strobe light, measuring the carbon monoxide’s motions every picosecond. Like a dance, the motions change over time—sometimes moving quickly, at other times, moving slowly. Analyzing the dance enabled Fayer to understand basic aspects of protein motions.

The LCLS laser will probe at x-ray wavelengths as short as an angstrom, which is about the size of an atom. The x-ray bunches, called pulses, will be hundreds of times shorter than a picosecond. Such an instrument will enable scientists to study how individual atoms inside molecules, proteins, liquids and solids dance. In previous instruments, scientists had to infer the nature of atomic dances; for example, Fayer’s group deduced protein motions based on how the carbon monoxide vibrated over time. But LCLS’s laser will permit researchers to watch the motion of atoms directly.

As a result, researching with free-electron lasers is a booming enterprise. Over thirty extremely large free-electron lasers are scattered worldwide, in places as diverse as Italy, Japan, and India. And many more are in development, including the LCLS’s fighting gun — the first hard x-ray free-electron laser in the world, which will use the electron beam from the linear accelerator and operate at energies up to 14.3 GeV.

“The source of the excitement is that nobody has been able to do this before,” said the free-electron laser conference co-chair, SLAC scientist John Galayda. It’s the same type of remark Stanford scientists already heard, nearly three decades ago.

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By Heather Rock Woods

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When operations resume, beam lines 9 and 10 will be ready to handle the fivefold increase in beam power—to 500 milliamps (mA)—that SPEAR3 began generating on June 20. The beam line development team will commission beam line 7 starting in January 2006.

SSRL currently has 11 beam lines; 18 experimental stations operated during the recent run. A typical beam line carries the x-rays created by magnets on the SPEAR3 storage ring some 30 to 35 meters to experimental stations where the research is done.

Beam line 9 delivers x-rays through three branch lines to three experimental stations. Two stations are for macromolecular crystallography and one is for x-ray absorption spectroscopy of biological systems. The line is funded by the DOE Office of Biological and Environmental Research.

Beam line 10, funded by the DOE Office of Basic Energy Sciences (BES), has two experimental stations. The station for vacuum ultraviolet and soft x-ray studies has been largely upgraded for 500 mA already. The second station, which is the focus of this summer's activities, is for hard x-ray materials science applications.

The upgrades to beam lines 9 and 10 involve mostly power handling and systems that channel the beam, which will now need additional cooling so the increased beam current does not damage optics or metal components. Meanwhile, elderly beam line 7 is being almost completely rebuilt.

"We're in the throes of taking a bulldozer to beam line 7 to scrape it clean and start over. Between the increased beam current and the new wiggler magnet recently installed, that represents a 15-fold



Close-up of SPEAR3.
(Photo by Peter Ginter)

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increase in the power of the beam, which was too much for the old beam line,” said Tom Rabedeau (ESRD), head of beam line development.

The National Institutes of Health (NIH) is funding two stations at beam line 7: macromolecular crystallography and biological x-ray absorption spectroscopy. The third station, used for materials scattering, is receiving funds from BES.

In addition to the three major upgrades, SSRL is doing more minor work on four other beam lines, and designing and fabricating two brand new lines that will be installed during the 2006 downtime. Beam line 12, privately funded by the Moore Foundation through Caltech, will allow study of very small macromolecular crystallography samples. Beam line 13, for vacuum ultra-violet and soft x-ray materials science, is being funded by BES.

“We’re in the middle of a three-ring circus of design, fabrication and installation,” said Rabedeau.

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Got Data?

By Monica Bobra

Over 10,000 CPUs scattered across the globe hum in unison for one of the world's major distributed computing systems, known as the Open Science Grid (OSG). Built and operated by teams from U.S. universities and national laboratories, the national grid computing infrastructure for large scale science is open to small and large research groups nationwide from many scientific disciplines. The OSG, which began operating on July 21, was designed to allow particle physics labs to share their computing resources more efficiently to face growing computing needs.

Now, many scientific institutions—including those unrelated to particle physics—can log onto the internet and run scientific applications on the Grid. DOE, NSF and member institutions provide funding. To become a member, institution-affiliated scientists must provide computing power, storage space or human resources. SLAC currently contributes 100 CPUs to the OSG, by designing software systems to track Grid resource usage and defining security policies. Twenty other institutions provide computing and many terabytes of data storage.

"There are no specific thresholds," said Richard Mount, head of SCS. But, he explained, adapting computers and storage to support the OSG infrastructure is not easy. "Nobody will do it unless they're serious players," said Mount.

To submit data processing jobs to the Grid, institutions and experiments agree how much CPU time a certain institution gives to an experiment. The request zooms through cyberspace into what is known as a middleware layer of OSG architecture, which prioritizes and schedules computing jobs. Because of the small number of users, prioritization has not been a problem. As the number of users increase, developers must come up with a prioritization plan. Eventually, paying commercial users may use portions of the Grid.

"There's no clear policy on how resources will be allocated," said Matteo Melani (SCS), an engineer who



The Grid makes the world your computer.

(Image courtesy of SLAC and Fermilab)

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is developing software to track resource usage for the middleware layer. To do this, Melani asks the resource providers and the experiments what resource they want to track, such as CPU, disk space and network bandwidth. He then designs software to answer questions like: How much CPU time did SLAC contribute to CMS? How much storage space did SLAC contribute to ATLAS? With this information, each institute can determine how to allocate their resources.

Bob Cowles (SCS) is helping to develop security policies for the OSG, and manages Grid security issues for SLAC. The security measures include the local autonomy of OSG computers on site.

All of SLAC's Open Science Grid computers process data from BABAR using a specific type of software. To do this, the computers access BABAR data, run algorithms and then send the results to other computers. During some stages of this process, such as data retrieval, the computers have a few free cycles.

When the computers have cycles to spare, they run the OSG software, which processes data. Currently CMS—a future experiment at CERN's Large Hadron Collider (LHC), which will turn on in 2007—runs Monte Carlo simulations. In the future, the computers will also process data from ATLAS, another LHC experiment.

"The infrastructure is smart enough to make sure all the computers are utilized all the time," said Melani. "It's very, very efficient in managing resources."

The SLAC computing infrastructure combined with the OSG middleware make sure we maximize computer utilization. Cowles, Mount, Melani and many others at SLAC are working on improving both the software and hardware contribution to the OSG. In the future, Mount hopes to add more computers to the OSG.

The 10,000 OSG CPUs are collectively processing jobs from about six collaborations worldwide. As the OSG develops, more institutions will join and more data will be processed. Mount can only conjecture what the future holds. "If grid technology is a success, it will create this marketplace in which all sorts of things can happen," said Mount.

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Offsite Use of SLAC Property and Your Responsibility

Remember, when you take any Laboratory property offsite for official use, you have full property custodian responsibilities for that item at all times.

Also, if you take a laptop or other government property to and from work, you need to document this using an Offsite Use Form. Make a note on the form that the item travels back and forth with you. A form is not required for cellular phones, PDAs, pagers or hand held calculators. The form is available on-line at:

https://www-bis.slac.stanford.edu/forms/Offsite_form.pdf

And, finally, notify Property Control when you return an item back to SLAC. We need to update our records. There are four ways to let us know the property is back on site:

- Fill in the date, location of the item and custodian on the original Offsite Use Form and mail a copy to Mail Stop 85A,
- Send an email to: sbpace@slac.stanford.edu
- Call Property Control, Ext. 2231, or
- Use the on-line property transfer option (<https://www-bis.slac.stanford.edu/slaonly/property/transfer/>).

Please report any loss or damage of property immediately to the Laboratory Safeguards and Security Office (Ext. 5333).

Contact: Leslie Normandin, Property Control, Ext. 4350, leslie@slac.stanford.edu

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Changes to Paid Time Off Policy

By Lee Lyon

I am writing to inform you of some changes the University has made in its policies regarding paid time off. Some of these changes are the result of system issues on campus and some are due to a changing interpretation of state labor law by the State Labor Commissioner.

Applicability

These policy changes are applicable to benefits-eligible regular employees (that is, those who accrue vacation and sick leave). These changes do NOT affect faculty or bargaining unit employees.

Effective Date of Changes

The changes will take effect September 1, 2005 at SLAC.

1. Proportional accrual of sick and vacation time:

Currently, benefits-eligible employees must work, or be in other paid status, at least half their normal work schedule in a month to accrue vacation and sick leave. Starting September 1, 2005, eligible employees will accrue vacation and sick pay in direct proportion to the amount of straight time pay received. For example, a full-time employee who is in pay status 25 percent of his/her regular schedule will receive 25 percent of his/her usual accrual. This change will benefit those employees who are in pay status less than half their normal work schedule because they will still accrue some sick and vacation time.

2. No accruals while on leave:

Currently, employees who are supplementing disability leave through salary continuation accrue sick and vacation time at the full rate. Employees will not accrue vacation or sick time while they are on any disability leave or unpaid leave of absence that begins on or after September 1, 2005.

3. Date of vacation accrual changes and crediting:

Starting September 1, 2005, changes in accrual rates for vacation are effective at the beginning of the month in which the employee reaches the anniversary date making her/him eligible for the increased accrual rate, and will be credited by the last day of that month.

4. Paid leave for exempt employees:

Since my last communication to you on this subject about a year and a half ago in which I stated that vacation for exempt employees should be reported only in full day increments, California labor law has once again been re-interpreted by the State Labor Commissioner. Based on this new interpretation, the University and SLAC are returning to the previous guideline regarding how vacation should be reported:

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Vacation for full-time exempt employees should normally be reported in four hour increments. PTO and sick leave can continue to be recorded in smaller increments, according to the time actually used. Supervisors must approve vacation and PTO use in advance in order to ensure appropriate staffing levels. In applying these guidelines, supervisors are encouraged to take into account the specific facts of any given employee's situation and to use appropriate discretion in approving time off for exempt employees. However, exceptions to the vacation guidelines should be made only after consultation with Employee Relations.

If you have questions, please contact Carmella Huser, Employee Relations and Training Manager (Ext. 2358, chuser@slac.stanford.edu) or Barry Webb, Employee Relations Representative (Ext. 2355, bwebb@slac.stanford.edu).

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Space Solutions

By Roz Pennacchi

Have you been wondering about the fence surrounding the area where the Security Office trailers used to be? Soon, two new modular buildings will be located there to help provide space for the LCLS project. These units must conform to SLAC's strict building code which requires them to meet very high seismic standards; that is why they have such extensive concrete foundations.

The new modulares are due to arrive in mid-August and be ready to occupy by mid-September. The modulares will house the BABAR Users who, in cooperation with the needs of the lab, are vacating their offices in the Physics and Engineering Building (Bldg. 280) so LCLS project personnel can be co-located.

The two new modulares are 36' x 60' and 24' x 60'. They occupy the space that used to be covered by two Security trailers, two storage containers and government vehicle parking.

Seven additional parking spaces have been added just past the Sector 30 gate (take the first right after the gate and drive along the north side of the Klystron Gallery a few yards and you will see new spaces on the right, next to the Salvage Yard fence).



Concrete foundation for two modular buildings.
(Photo by Nina Adelman Stolar)

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Chemical Management System is Here

By Brian Sherin

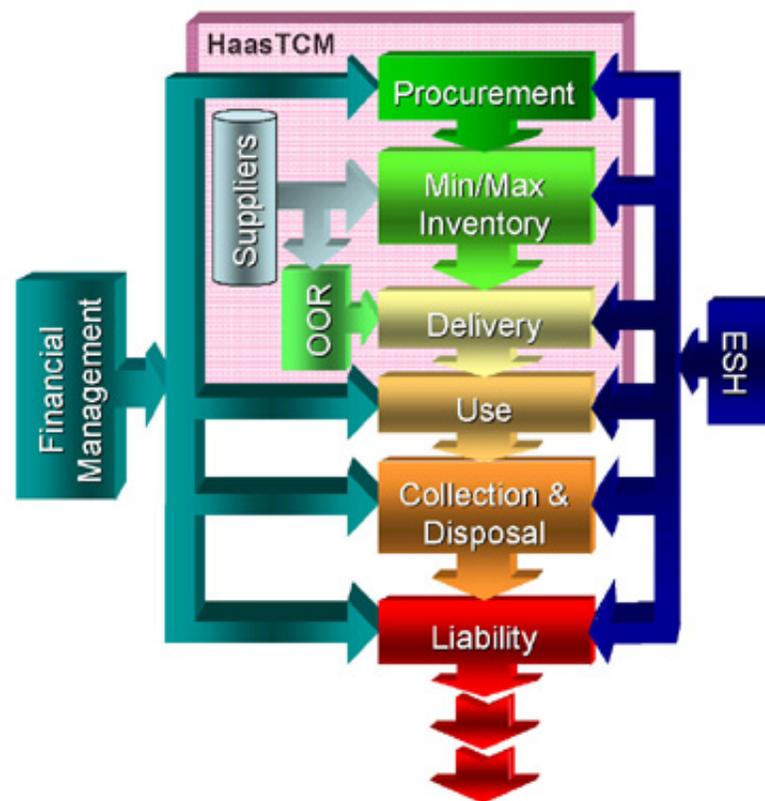
Since 2001, SLAC has been working toward implementing a Chemical Management Services (CMS) system to best control the lifecycle of chemicals used at this institution. The main goals of such a system are to:

- reduce risks to employees and the environment;
- improve quality and management of chemical products used to in support of operations;
- improve productivity by eliminating chemical management tasks from non-mission critical responsibilities;
- reduce expenses by leveraging the expertise of a CMS partner through improved chemical supply chain management;
- reduce scrap and waste; and
- minimize legal and financial liability.

After the substantial efforts of a long list of stakeholders, we are pleased to announce that the SLAC CMS program officially went 'live' on August 1. As of this date all chemical purchasing and management is being coordinated through HaasTCM and their web-based tcmIS application.

Procurement

Implementing the CMS Catalog has allowed SLAC to reduce the total number of independent chemical



(Image courtesy of ES&H)

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suppliers from ~100 to one. The vastly improved data management will allow us to accurately track chemical usage by organization and be better able to do financial analysis and planning. We have created a comprehensive catalog of 1,350 products. The vast majority of chemical products used at SLAC are now captured in the system.

Inventory

HaasTCM has created a system using either a Min/Max (minimum/maximum) inventory maintained at their Chemical Hub in Gilroy, or can be ordered as OOR (order on request) items for non-standard materials. Because HaasTCM can secure preferred pricing through its suppliers SLAC will experience a minimum cost savings of at least 5 percent. Other key benefits include reduced onsite storage reduced risk of environmental impact, and improved recordkeeping for regulatory compliance.

Delivery

Items that are part of the Min/Max Inventory are delivered within one business day when the orders are placed and approved by 1PM. OOR items are to be delivered by Haas by the delivery promise date that is shown in tcmIS once the PO is placed. Having an accurate system to manage the inventory will improve our ability to receive the correct chemicals from the vendor and the just-in-time delivery method helps ensure we are only purchasing what we need.

Use

Once the item is delivered to the requester, it becomes the responsibility of the user(s) and is to be handled in accordance with normal SLAC ESH policies and procedures. Users of chemical materials should avail themselves of the integrated MSDS Viewer in the tcmIS application (accessible both from tcmIS and from the ESH CMS webpage).

Collection, Disposal and Liability

Most chemicals eventually require proper collection and disposal as hazardous wastes. With improved inventory control, we anticipate that there will be further reductions in hazardous waste generation since we will only have what we need for operation and will have a dramatic reduction in scrap and obsolete chemicals. This waste reduction will also lower our long-term liability.

Financial Management

Chemical purchases at SLAC have traditionally averaged about \$1.2M per year. However, this only represents the direct expenditures on chemical deliveries. Industry experience places the indirect costs (labor, facilities, insurance, disposal, environmental restoration, etc.) at as much as 10 times the direct cost. An analysis of SLAC's operations in 2001 placed the estimate between 5 and 6 times the direct chemical spend. That puts our total estimated cost at \$6-7M per year. This program will provide us with a much better sense of how we are spending money and will likely result in lower chemical commodity and indirect expenses.

Implementation and Management

The immediate impact of the full implementation of the program is that ALL chemical purchases must now be placed through tcmIS and the former methods of chemical procurement are to be discontinued and will not be supported.

If there is the need for a chemical product that has not yet been incorporated in the catalog SLAC ESH will be able to assist you. For assistance or help in troubleshooting, training and general questions on the system contact:

Ray Barbara, SLAC HaasTCM Representative,
Ext. 8776,
rbarbara@slac.stanford.edu

Matt Padilla, ESH,
Ext. 3861,
mpadilla@slac.stanford.edu

Over the next weeks and months we will be very carefully monitoring the system to make certain that it is working as envisioned and we will make any necessary modifications to ensure we meet our goal of providing efficient, cost effective, and safe management and delivery of chemicals. We will also provide ongoing reports through the CMS Website on how the system is working.

A program implementation of this size, scope and importance could not have been completed without a large cast of characters and stakeholders. Please join me in congratulating all of them on a job well done.

For key program elements and the full CMS Project Team, see:
<http://www-group.slac.stanford.edu/esh/cms/>

The Stanford Linear Accelerator Center is managed by [Stanford University](#) for the [US Department of Energy](#)

Last update Friday August 19, 2005 by Chip Dalby

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The SLAC Emergency Hotline Number:

1-877-447-SLAC (7522)

Please make a note of the SLAC Emergency Hotline number. In the event of an emergency, the most current information about SLAC will be a single phone call away.

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MILESTONES

Service Awards

Appointments and Awards

Owen Long (BABAR/UC, Riverside) received the 2005 DOE Outstanding Junior Investigator award. One of only seven issued nationally this year, his award-winning proposal is titled A Program to Study CP Asymmetries in Penguin-dominated B Decays at BABAR.

5 Years

Borden, Tom (REG), 8/21
 Dungan, Pat (LCLS), 8/21
 Hughes, Michael (CEF), 8/22
 Knopf, James (ESD), 8/16

10 Years

Johnson, Ron (ESD), 8/29

15 Years

Choi, Brian (ESRD), 8/27
 Neibel, Matthew (CEF), 8/27

30 Years

Adams, Neal (SCS), 8/26

To submit a Milestone, see: <http://www.slac.stanford.edu/pubs/tip/milestoneindex.html>

See Awards and Honors at: <http://www.slac.stanford.edu/slac/award/>

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Next talk in the SLAC Public Lecture Series:

Neutrinos Get Under Your Skin

Boris Kayser, Fermilab

Tuesday, August 30, 7:30 p.m.
Panofsky Auditorium



(Image courtesy of Terry Anderson)

For more information, see:

http://www2.slac.stanford.edu/lectures/info_2005/2005_08_30.htm

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Women in Science Presents

Innovative Ideas — Tap into Your Inner Einstein

Gabriele Hilberg
and
Janet Dang

Tuesday, August 23
12 Noon - 1:00 p.m.
Panofsky Auditorium

Do your best moments of inspiration happen in the shower? Ever wonder why?

Hilberg and Dang will demonstrate how to reliably generate a moment where a creative solution comes to you. Discover the key factors that open the quantum portal of seeing new possibilities beyond present thinking.

Caution: This process is potentially dangerous to those of you invested in your ego.

Bring a lunch and bring a friend!

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