SLAC WWW. SLAC pages changed yesterday.
printed 09/09/1996

SLAC ARCHIVES COLL 00-072
SERIES 2 SUBSERIES 1
BOX 4 FOLDER 11

SLAC Pages Changed Yesterday

Last Updated: 9/9/96

The following 3 pages in the main SLAC production Web space were added or updated yesterday. The list does not include files in other formats like .gif, .ps, or plain text, nor does it include daily reports.

http://www.slac.stanford.edu/comp/vendor/vendor.html
http://www.slac.stanford.edu/exp/e155/slaconly/e155_notes.html
http://www.slac.stanford.edu/exp/e155/e155_meetings.html

Computing Vendors Online

SLAC Last update: September 7, 1996
SLAC: [Welcome | Highlighted | Search | People]

Recent Entries

Sep 7 '96 Software Age
Sep 6 '96 NBase Communications

Contents

- Computing Companies
- Publishers and Conference Organizers
- Other Information Sources

Some computing and related vendors used by SLAC are serving information to the worldnet.

Computing Companies

A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z

Adobe
: Adobe Systems Incorporated's home page, including a permuted index to their page titles and access to Free Acrobat Readers for viewing PDF files.

Alantec
: Alantec's information server with an Overview of Alantec, a Newsletter, Technical Support Reports, and Contact & Ordering information.

America On Line
: Americal On Line (AOL) the largest provider of online services in the world. .

Andataco
: Andataco experts in network storage solutions.

Apple
: Apple's WWW site and their Support & Information page with corporate info, product descriptions, technical services and software updates.

Cabletron
: Cabletron's WWW site provides customers with access to information about Cabletron's products, services and technical support.

Cisco
: Cisco Systems' Information Archive with networking materials for its customers and information on education.

Claris
: Claris International's home page with information on products and demos, software library, sales and customer assistance, and technical support.

Combinet
: Combinet, Inc.,'s home page with information on its networking products, newsletter, and ISDN.

Compaq
: Compaq's home page.

CREN (Corporation for Research and Educational Networking).
: CREN serves education, research, and the rest of the Internet community with software and services. CREN's focus is on supporting educational outreach, worldwide collaboration, and easy access to information resources throughout the network. Among other services, CREN provides BITNET III which allows dial in access to the Internet.

Dell

Dell Computer Company's home page with products, support and corporate information.

DEC

Digital Equipment Corporation's WWW server with extensive DEC information (including the Customer Update), Customer Services, newsgroups and mailing lists, archives and public domain software, and access to Alpha AXP demo systems.

EIT

Enterprise Integration Technologies' WWW server, with information about the company and many other Internet resources.

Eudora

Eudora (Qualcomm) home site.

Farallon

Farallon (maker of innovative plug and play networking products) Web server.

Frame Technology

Frame Technology is the maker of the FrameMaker publishing product that is uaed at SLAC. They are now owned by Adobe.

Frontier Software

Frontier Software's Web site with information on the Netscout product family of SNMP/RMON network monitoring devices.

Global Village

Global Village Communications Home page provides product information, access to customer support etc.

HP

The Hewlett-Packard Company's WWW server with news and information on products, contacts, services & support, the organization itself, and how to navigate its Web.

IBM

IBM Corporation's home page with information on its products, services, industry solutions, technology, research, and more. See also RISC System/6000 in Austin on the hardware and AIX software and Almaden Research Center including David Singer's Page of Pointers with much OS/2 information.

IKE

IBM Kiosk for Education, developed at the University of Washington with IBM information, application software, and a bulletin board for people in the higher education community. Follow-on to ISAAC.

Innosoft International Inc.

Innosoft home of the PMDF eMail Interconnect.

Intel

Intel's home page with information on Processors & PCs, Communications & Networking, PC Developer Support, and Embedded Design Products

Intergraph

Intergraph's home page provides access to products and services, user groups, etc.

InterNex

InterNex, an ISDN Internet Service Provider, has a home page with information on support, news , connectivity and the company.

Ipsilon

Ipsilon, the IP switch company, with information on products, support and services, and technology.

Mathematica

Mathematica from Wolfram Research.

MathWorks

The Mathworks, Inc.,'s WWW server on the company and its products, *e.g.*, the MATLAB program.

Microdisc Department

The **Micro**computer **Disc**ount program of the Stanford Bookstore with product information, ordering guidelines, prices etc.

Microsoft

Microsoft Corporation's experimental WWW server with public information about the company and its products.

N.A.T.

Network Applications Technology (N.A.T.) home page with company and product information.

NBase Communications

NBase an early GigaBit Ethernet switch vendor.

NCD

Network Computing Devices, Inc.,'s home page with corporate, product, and technical information, including material on its X terminals.

Netscape

Netscape's home page.

Network General

Network General Corporation's home page with sales, service and product information.

NeXT

NeXT Computer, Inc.'s site.

Novell
: Novell's home page with access to manuals, technical support, services and applications.

Open Horizon
: OPEN HORIZON, INC. is a leading provider of connectivity software that assists organizations in moving from departmental to enterprise-wide client/server solutions. The company builds and markets Connection, the first product to provide new or existing applications with plug-and-play access into enterprise services, such as heterogeneous databases, user authentication, data encryption, directory services and transaction processing monitors.

Oracle
: Oracle's Information Highway home page.

Pac Bell
: Pacific Bell's home page.

PictureTel
: PictureTel a Global Video Conferencing company.

Prodigy
: Prodigy.

QMS
: QMS, Inc.,'s home page with information on its document processing and printing products and services.

Quadralay
: Quadralay make applications such as WebWorks Publisher that allow one to create Web HTML pages using FrameMaker.

Seagate
: Seagate's home page for information on storage and software products, technical support and product specifications.

SGI
: Silicon Graphics, Inc.,'s home page with marketing, product, class, technical, and other information on its high-performance visual computing systems.

Stanford Bookstore MicroDisc
: Stanford Bookstore MicroDisc provides Product Information, Prices, Ordering Guidelines, hours, location, and policy.

StarNine
: StarNine Technologies

Sun
: Sun Microsystems, Inc.,'s home page with product and service information. See also the Sun Archives at the University of North Carolina (UNC), including the Sunergy documents on computing usage and futures associated with Sunergy Satellite Broadcasts and Newsletters.

Tektronix
: Tektronix's home page with information on printers, networking (including Xterminals), video, and measurement products.

TGV
: TGV's home page with products & services, customer support and company information.

USRobotics
: USRobotics WWW server provides information on products and services, contacts, access to support.

WOW WOW from CompuServe is a powerful, new online service specifically designed for home use.

White Pine
: White Pine Software Inc. provides a complete line of X Window System Display Servers (eXodus), DEC and Tektronix terminal emulation software, and the commercial version of CU-SeeMe.

Wollongong
: The Wollongong Group's home page with products and services, company information and marketing partners.

The Workstation Group
: The Workstation Group Ltd. specializes in software for companies converting from IBM mainframes to Open Systems Solutions. Their products include Uni-REXX and uni-XEDIT.

Publishers and Conference Organizers

Addison-Wesley
: FTP server for Addison-Wesley and related publishing houses.

AIXtra OnLine
: /AIXtra is IBM's Magazine for AIX professionals.

Cardinal Business Media Inc.
: Cardinal Business Media Inc. publishers of the INTER*NETWORK* magazine.

Computerworld
: Computerworld's home page, the Internet connection for the IT community.

Datamation

Datamation's home page providing technology and business solutions for IS managers.

Data Communications
: Data Communications Magazine home page for networking professionals who plan, design, and manage corporate backbone networks.

Dr Dobb's Journal
: Dr Dobb's Journal home page with information on Software Careers, Business Links, Source Code, Feature Articles and much more.

Information Week
: Information Week's TechWeb home page.

MacUser
: MacUser home page.

MacWeek
: MacWeek posts new stories daily.

MacWorld
: MacWorld home page.

Mecklermedia
: MecklerMedia, publishers of WebWeek and Internet World Conference Organizers.

Network Computing
: Network Computing, a monthly magazine on client/server computing, articles are available Online via WWW

NetworkWorld
: NetworkWorld Fusion to learn more about the top stories in NetworkWorld.

ORA
: O'Reilly & Associates' WWW Resource Center on their organization, its UNIX and Internet publications, and other products. See also the Global Network Navigator (GNN), an information center with several electronic publications and other resource centers. *N.B.*: ORA's Terms and Conditions of Use require subscription to GNN, a heretofore uncustomary restriction to information access on the Internet.

Prentice Hall
: Prentice Hall's home page, including its Professional Technical Reference (PTR) titles.

SOFTBANK
: SOFTBANK Exposition and Conference Co. (previously ZD Expos), presenter of high-tech trade shows like **NetWorld+Interop** and the **Seybold Seminars** and publishers of *ConneXions*, plus an online virtual trade show.

WAIS
: WAIS, Inc.'s home page with information on its network publishing products and services including a technical overview of WAIS concepts.

WEB Techniques
: WEB Techniques monthly magazine provides solutions for Internet and Web developers.

Other Information Sources

You may also find the following SLAC pages interesting: Information Grab Bag, Network Reference Information.

Also see Stanford's Portfolio Vendor list.

Or check out the following information elsewhere:

- AT&T 800 Directory.
- CommerceNet.
- Commercial Sites Index.
- Computer and Software Magazines and Journals from "View from Internet Valley".
- comp.newprod archive.
- Computer and Communication Companies.
- Guide to Computer Vendors presented by SBA * Consulting.
- Directory of WWW.*.com servers.
- FedEx to allow you to track a Package.
- National Yellow Pages:
  - Big Book provides a map tool to find businesses in the U.S.
  - BigYellow contains over 16 million listings.
  - Yellow Pages Online contains over 16 million listings.
- Software Age has a searchable database of over 1800 applications.
- Silicon Valley Web Directory with links to over 2000 Computer Industry Companies.
- Top 100 American Computer Companies from "View from Internet Valley".
- The Virtual Software Library lets you search a database of > 130,000 files, culled from the 22 largest software

archives, for shareware and freeware, as well as provides access to more than 100 reviews of PC and Mac packages.

This page was originally compiled by Joan Winters, starting from information in SLAC's Information Grab Bag and Network Reference Information.

[Feedback | Page History]
Cottrell

E155 Technical Notes

Whenever possible, postscript versions of the E155 Technical Notes will be included as references on this page. If a postscript version is not referenced on this page or you are unable to print this files, contact Lynn Hanlon to obtain copies of the Technical Notes.

---

1. Modifications to the Shower Counter Electronics for E155--M.C.Berisso (6-Dec-1995)
   - Text of Note (postscript)
   - Postscript version of Proposed Electronics Diagram (10k)
   - Postscript version of E154 Electronics Diagram (10k)

   Updated electronics diagrams (from April 96):

   - New Jpeg version of E155 Electronics Diagram for 2.75 Degree Spectrometer
   - New Jpeg version of E155 Electronics Diagram for 5.50 Degree Spectrometer
   - New Jpeg version of E155 Electronics Diagram for 10.5 Degree Spectrometer
   - Alternative proposal for 10.5 Degree Spectrometer Electronics (Jpeg)

2. E155 Cerenkov Baffle Dimensions--P. Bosted (6-Mar-1996)
   - Text of Note

3. Design of collimation baffles for the Cerenkov counters--M. Buenerd (5-Mar-1996)
   - Complete Note (postscript)

4. Background study in the E154 data--M. Buenerd (13-Mar-1996)
   - Complete Note (postscript)

5. E155 10.5 Degree Spectrometer Parameters--P. Bosted (23-April-1996)
   - Complete Note (postscript) (updated 12-June-1996)

6. Measurement of the Power Distribution Inside the E143 Target Holder-- Stephen Bueltmann, Paul McKee, Al Tobias (13-May-1996)
   - Complete Note (postscript)

7. The 11 Degree Spectrometer fro E155 Design Report (NOTE: Not what is actually built. See E155 Technical Note #10 for final) -- Peter Bosted (December 1995)
   - This note is available from Lynn Hanlon (415-926-3611)

8. Proposal to Add a Spectrometer to E155 -- E155 Collaboration (February 1996)
   - Text of Note (postscript)
   - Figures are available from Lynn Hanlon (415-926-3611)

9. E155 Collimators and Magnets for 2.75 degree spectrometer -- Peter Bosted (20 June 1996)
   - Complete Note (postscript)

10. The 10.5 Degree Spectrometer -- Peter Bosted (26 June 1996)
    - Complete Note (postscript)

11. Solid Targets for E155 -- Peter Bosted (5 July 1996)
    - Complete Note (postscript) (Revised 31 July 1996)

12. Spectrometer Calibration with Parasitic Beam -- Peter Bosted (26 August 1996)
    - Complete Note (postscript)

13. Thermal expansion of Beryllium and Aluminum -- Oscar Rondon (August 1996)
    - Complete Note (postscript)

14. Dilution Factor Calculation -- Oscar Rondon (August 1996)
    - Complete Note (postscript)

15. Simulation of the Cerenkov Counters of the E154/E155 Experiments -- Michel Buenerd (17 July 1996) (Actually TN 15))
    - Complete Note (postscript--warning--file is 6k Blocks)

16. Gain Matching for Hodoscopes at 5.5 Degree -- Antonelle Romano, Hyun-Kyung Chung, Piotr Decowski (29 August 1996) (TN 17)
    - Text of Note (postscript)
    - Figure 1 (postscript)
    - Figure 2 (postscript)
    - Figure 3 (postscript)
    - Figure 4 (postscript)
    - Individual gain curves available from Lynn Hanlon (415-926-3611)

17. Test of Fingers for 10.5 Degree Hodoscope -- Hyun-Kyung Chung, Piotr Decowski (30 August 1996) (TN 18)
    - Text of Note (postscript)
    - Figure 1 (postscript)
    - Individual gain curves available from Lynn Hanlon (415-926-3611)

18. Lithium Deuteride and Deuterated Ammonia Targets -- Oscar Rondon (September 1996)
    - Complete Note (postscript)

Go back to SLAC home page.

If you have any questions or complaints regarding the E155 Technical Notes web page please contact:
Lee Sorrell

E155 Meetings

Last updated 8 September 1996

E155 General Meeting

Mondays at 11:00 AM
Location: Group A Conference Room in the Central Lab Annex (1st Floor)
Convened by: Steve St. Lorant (saint@slac.stanford.edu)

E155 ESA Floor Meeting

Meets daily at 10:00 AM
Convened by: Steve St. Lorant (saint@slac.stanford.edu)

E155 Detector Meeting

Fridays at 11:00 AM
Location: Group A Conference Room (Central Lab Annex)
Convened by: Lee Sorrell (sorrell@slac.stanford.edu)

E155 Target Meeting

Mondays at 1:30 PM
Location: Bldg 223 (second floor conference room in the research yard)
Contact person: Stephen Bueltmann (stephenb@slac.stanford.edu)

Hodoscope Meeting

Next Meeting: TBA
Location: TBA
Convened by: Sebastian Kuhn (kuhn@cebaf.gov)
Frank Wesselmann (frw@esa.slac.stanford.edu)

Go back to SLAC home page.

If you have any questions or complaints regarding the E155 Meeting pages please contact:
Lee Sorrell

SLAC www. SLAC pages changed yesterday
printed 09/10/1996

SLAC ARCHIVES COLL 2
SERIES 2 SUB-SERIES 1
BOX 1 FOLDER

SLAC Pages Changed Yesterday

Last Updated: 9/10/96

The following 23 pages in the main SLAC production Web space were added or updated yesterday. The list does not include files in other formats like .gif, .ps, or plain text, nor does it include daily reports.

http://www.slac.stanford.edu/slac/www/general/grabbag.html
http://www-spires.slac.stanford.edu/find/spires.html
http://www.slac.stanford.edu/exp/e155/slaconly/e155_notes.html
http://www.slac.stanford.edu/esh/bulletins/b21b.html
http://www.slac.stanford.edu/esh/bulletins/index.html
http://www.slac.stanford.edu/esh/bulletins/b17.html
http://www.slac.stanford.edu/esh/bulletins/b09c.html
http://www.slac.stanford.edu/esh/bulletins/b22.html
http://www.slac.stanford.edu/esh/bulletins/b05.html
http://www.slac.stanford.edu/esh/bulletins/b03.html
http://www.slac.stanford.edu/esh/bulletins/b11.html
http://www.slac.stanford.edu/esh/bulletins/b20a.html
http://www.slac.stanford.edu/esh/bulletins/b19b.html
http://www.slac.stanford.edu/esh/bulletins/b10.html
http://www.slac.stanford.edu/esh/bulletins/b15.html
http://www.slac.stanford.edu/esh/bulletins/b04.html
http://www.slac.stanford.edu/esh/bulletins/b18.html
http://www.slac.stanford.edu/esh/bulletins/b13.html
http://www.slac.stanford.edu/esh/bulletins/b23.html
http://www.slac.stanford.edu/esh/bulletins/b14c.html
http://www.slac.stanford.edu/esh/bulletins/b43.html
http://www.slac.stanford.edu/esh/bulletins/b24.html
http://www.slac.stanford.edu/esh/bulletins/b41.html

Information Grab Bag

SLAC 7 Jun 1996

This page is frozen and has not received any significant updating since January, 1995. **Links are not being maintained.** The question of a grabbag of interesting Web sites to SLAC is on the list to be addressed as time allows. Please contact Joan Winters if you would miss any of these links.

Here's a random selection of information various folks at SLAC have found interesting. Links may migrate from this page to others as more appropriate locations are found, the links become obsolete, or they are superceded by more interesting ones.

Berkeley Subway
: Connects to a number of exhibits around the world relating to biology. Also has Expo, an electronic exposition that includes the Vatican Exhibit, and the Honolulu Community College campus-wide, hypermedia information service, along with other major information sources.

Census Bureau
: The US Census Bureau and its programs, with access to some data and software. Plus links to other sources of census data.

CIA Factbook
: The CIA World Factbook 1993. Encyclopaedic compendium on the world's countries.

FBI
: US Federal Bureau of Investigation (FBI) Information Page, on UNABOM letter bombing series.

IRS
: Index of federal tax forms and publications with sources of further assistance from the US Department of the Treasury Internal Revenue Service and Maxwell Labs. See also their Taxing Times.

Map Viewer
: Maps of the earth and US-only that can be viewed with different scales, projections, features, *etc.* An "experiment in providing dynamic information retrieval" from Xerox PARC.

NSF Activities
: Documents from the NSF's Science and Technology Information System (STIS). Includes submission information for proposals.

Periodic Table
: Elemental info from the CRC Handbook of Chemistry and Physics and Lange's Handbook of Chemistry.

say
: A WWW interface to the rsynth text-to-speech translator. *N.B.*: So far only supports output to xmosaic on Sun SPARCstations.

SSC Surroundings
: Contour and road map of the Superconducting Super Collider and its surroundings.

UNC
: The University of North Carolina's home page, its SunSITE repository of diverse public domain documents and software (*e.g.*, on 3D viewing), and its laUNChpad Internet Service Mediator.

US documents*
: Documents on which the United States is based, *e.g.*, the Constitution. See also the California State Legislature's FTP server.*

Weather Maps
: Satellite photos, frontal maps...*etc.* See also the Michigan State and Stanford repositories. Have you ever seen a global weather movie (>800KB)? Or find out the conditions and forecasts at places in the US to which you're traveling.

Webster's Dictionary
: Including phonetic match, stem, and thesaurus. Or check Roget's Thesaurus. Then again, get help with your German through Langenscheidt's Dictionary.

Astronomy

CloudlessWorld.gif
: A composite image from satellite photos of our home (with background info).

NASA Events
: Daily press releases from NASA. See also the Hot Topics (including DoD Clementine and NASA Hubble photos) and NASA Ames FTP archives.

WebStars
: NASA's "WebStars: Astrophysics in Cyberspace," a collection of pages that point to *diverse* resources. See, among others, the StarTrax-NGB browser provided by HEASARC to explore its archive of high energy astrophysics data from various space missions.

Computer Science and Human Factors

GVU
: Georgia Tech's Graphics, Visualization and Usability Center. Includes information on stereoscopic display.

PCD
: Stanford University's Project on People, Computers, and Design, directed by Terry Winograd. With links to related Stanford work. See also CDR, the Center for Design Research.

TNS
: MIT's Telemedia, Networks, and Systems group, headed by David Tennenhouse. Includes demos of live video. *N.B.*: So far only supports output to NCSA Mosaic for X.

Libraries and Museums

Bodleian
: The Bodleian Library's Gopher.

LCMARVEL
: The Library of Congress's Machine-Assisted Realization of the Virtual Electronic Library (MARVEL). See also its FTP site for larger and/or binary files.

Smithsonian Natural History
: Smithsonian Institution's Natural History Gopher. See also some Smithsonian Pictures, from air and space through zoology. (Or check out the SLAC repository.*)

Other Information Sources

You may also find the following SLAC pages interesting: Introduction to Local Area Resources, Vendors Online.

And the following information from elsewhere: EIT's Internet Resources, Stanford's Other WWW Links, NASA's WebStars What's New & Announcements, NCSA's What's New, and SunSITE's Internet Dog-Eared Pages.

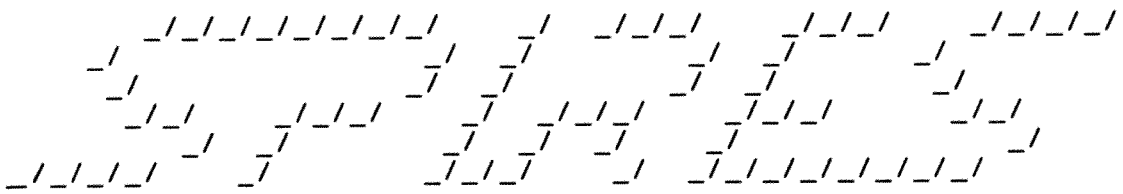
Or look for topics using W3 Search Engines like JumpStation.

---

* Only the MidasWWW browser suppports access to non-UNIX FTP servers like this.

This page was originally inspired by ones written by Tony Johnson and Bebo White. Links from them still find their way into this page, as do links from Les Cottrell, Greg Mushial, Pat Clancey, and Dr. Chaos, among others.

Winters



SLAC Library Databases and Documents

Welcome to SLAC-SPIRES Information Retrieval System

Listed are the SLAC Library databases and documents of interest to the high-energy physics community. The databases are maintained under SPIRES - Stanford Public Information REtrieval System. If a caretaker of a particular database or document is not listed, please address your comments to: library@slac.stanford.edu

The following Library databases are currently accessible to WWW users:

Books:
SLAC Library book catalog. See also the list of books received in the last four weeks, or 'clickable' subject lists, A through K and L through Z, for the BOOKS database.

HEP Preprints, e-Prints, Articles:
HEP preprint database. Contains bibliographic summaries of more than 320,000 particle physics papers. Included are preprints, journal articles, technical reports, theses, etc. Searchable by author, title, report number, institution, collaboration, and more. Find citations of your favorite author or article. View postscript versions of selected preprints, read abstracts of the e-print archive papers. Need more help?

Recent e-Prints:
Useful in searching for recent high-energy physics e-prints from the Los Alamos archives, perhaps not yet covered by the HEP database. Find abstracts and viewable postscript of articles posted today, yesterday, in the last seven days, week before that, or anytime. **Preferred access to older e-prints is through the HEP preprint database (above).**

Hepnames:
World-wide e-mail directory of people related to particle physics. Includes SLAC physicists, personnel.

Conferences:
Past and future particle physics conferences. Find the list of this month, or next month, or next year conferences, or cover the period Apr-Jun 1996, or Jul-Sep 1996, or Oct-Dec 1996, or Jan-Mar 1997, or Apr-Jun 1997, or make your own search. To announce a new HEP-related conference, please write to: conf@slac.stanford.edu

Institutions:
Addresses, phone and fax numbers of high-energy physics institutions. See also the SPIRES list of HEP institutions with WWW servers.

Experiments:
Experiments in high-energy physics (source for the PDG LBL-91 Report). See also the Experiments Online document.

SLAC-Speak:
Glossary of SLAC, and HEP-related acronyms and terms.

The following related documents are maintained by the Library staff:

PPF-List:
List of new preprints currently displayed in the Library. See also the last week's list.

New from SLAC Authors:
List of the most recent preprints and reports by SLAC authors.

SLAC Library News:
The Web version of the Library News weekly publication.

Particle Physics Online:
A guide to online catalogs, databases, directories of value to the particle physics community.

Some Other SLAC-SPIRES Databases

Seminars:
Meetings, colloquia and seminars of interest to the broad high-energy physics community with entries for SLAC and Stanford University, along with other academic and industrial facilities in the area including Berkeley, Lockheed, San Francisco and Santa Cruz. Find seminars for today, tomorrow, all future dates, or make your own search. See also a separate listing for SLAC Departmental Colloquia.

SLAC Phone Book:
SLAC phone book with e-mail addresses, room numbers, mail-stop codes.

FreeHEP:
A collection of software and information about software which is useful in high-energy physics. You can also browse an alphabetical list of all packages, or search for packages by subject area, or go to the FreeHEP Home-page.

Particles:
Data from the Review of Particle Physics (RPP). This database is no longer available at SLAC. Please, visit the LBL Particle Data Group (PDG) WWW server, where you can find the full-text postscript version of the latest edition of the RPP. To search the corresponding database, use Telnet to reach the PDG public access account at MUSE.LBL.GOV (or 131.243.48.11). Login as PDG_PUBLIC. Another PDG database formerly maintained in SPIRES, the Reaction Data, is now available at the HEPDATA server in Durham.

SPIRES Information Service Elsewhere

Stanford FOLIO:
Log on to Stanford campus FOLIO information system (may be used only by those who have the Stanford ID number and access code).

HG, SLAC. Last update: 10 Sep 1996

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #21B
GUIDELINES FOR WEARING WHOLE-BODY AND EXTREMITY DOSIMETERS

Radiation dose measurements are required by law. Although radiation levels at most locations at SLAC are low, it is essential to measure radiation doses to personnel to ensure that dose levels are As Low As Reasonably Achievable (ALARA). The SLAC dosimeter has passed performance evaluations in the monitoring of low energy photon, high energy photon, low energy neutron, and high energy neutron radiations, and is accredited by the Department of Energy (DOE) Laboratory Accreditation Program. The ultimate effectiveness of the dosimeter depends, however, on SLAC personnel wearing their dosimeters properly. This bulletin provides guidelines for properly wearing whole-body and extremity dosimeters.

Whole-Body Dosimeters

Follow these guidelines for wearing whole-body dosimeters:

1. Wear your dosimeter at all times while working in or visiting areas at SLAC that are defined as Controlled Areas. Controlled Areas include:

- Designated areas of the Cryogenics Building (Building 6).
- The Test Cell Facility (Building 8).
- Designated areas of the ES&H Building (Building 24).
- Designated areas of the Light Fabrication Building (Building 25).
- Designated areas of the Heavy Fabrication Building (Building 26).
- The high-bay area of the Test Laboratory (Building 44).
- The area inside the Controlled Area fence line. Entrances to this area are Gate 17, the Sector 30 Gate, the Alpine Gate, and the pedestrian gates near Building 003 and Gate 17.

Controlled Areas are posted with this sign.

2. Wear your dosimeter at SLAC in all posted radioactive material storage areas; Radiation, High Radiation, and Very High Radiation Areas; and contamination areas.

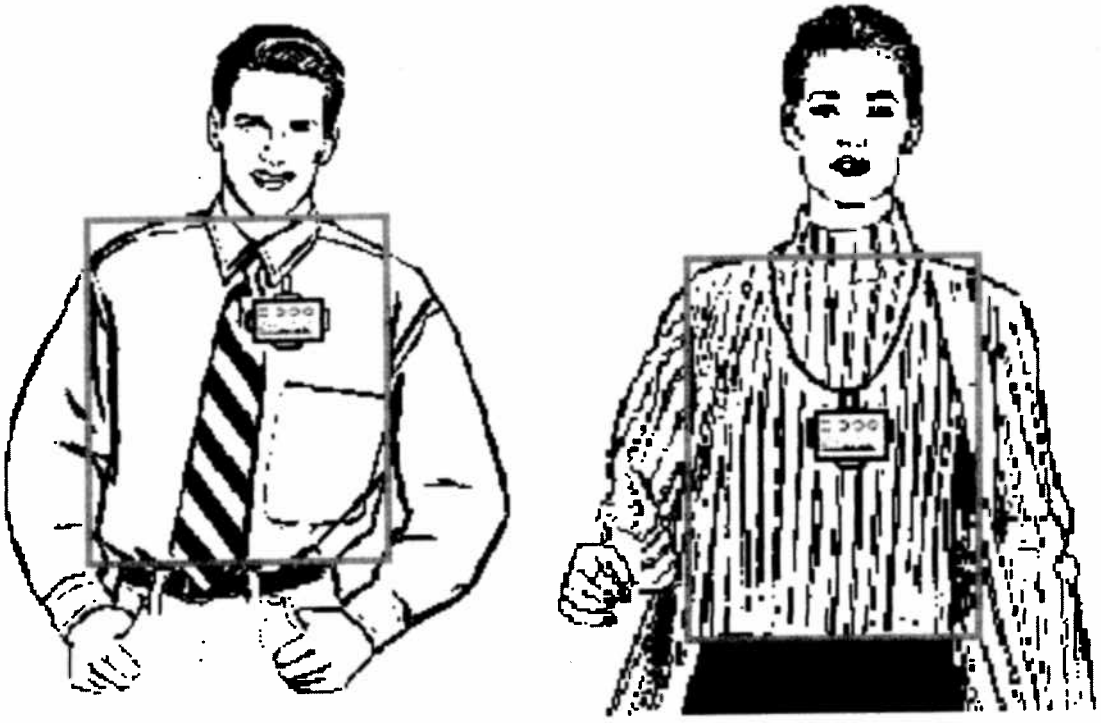
3. Wear your dosimeter on the front of your upper torso between your neck and waist on the outside of your personal clothing. Be sure that the front of the dosimeter faces out and that nothing covers the beta window. This practice ensures that the radiation dose recorded by the dosimeter is a reasonable representation of your whole-body radiation dose. Deviation from this practice may lead to an inaccurate measurement of your whole-body radiation dose.

4. You may wear your dosimeter around the neck on a non-metal necklace that meets SLAC industrial safety requirements if you do not work around rotating machinery.

5. Immediately notify Operational Health Physics (OHP) if you receive any internal medical isotopes.

6. If your dosimeter gets wet, dry the outside. If there appears to be some moisture inside the case, bring the dosimeter to the OHP Dosimetry Office.

The following figures illustrate the proper ways to wear whole-body dosimeters:

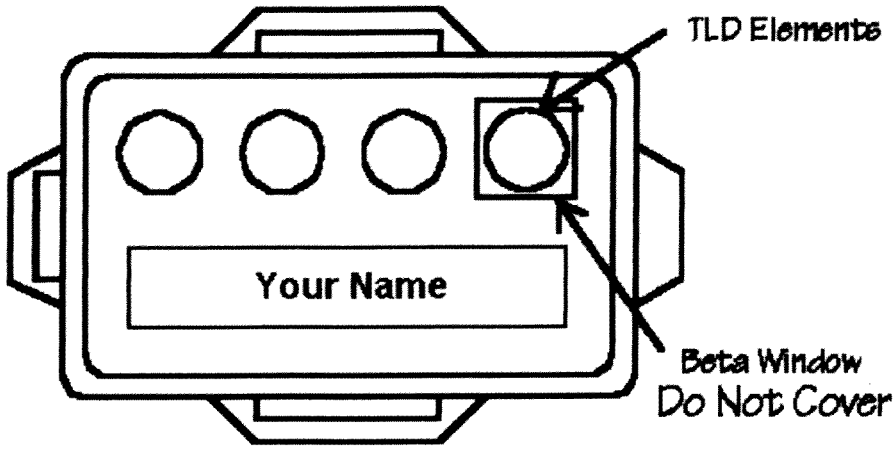


To ensure that your dosimeter records your whole-body radiation dose as accurately as possible:

Do Not:

- Attempt to open the dosimeter case. It will probably break as a result. If your dosimeter case is damaged, take it to the OHP Dosimetry Office where the case can be replaced.
- Carry your dosimeter in a wallet or in a hip or shirt pocket while in a Controlled Area.
- Clip your dosimeter to a pants pocket or to a belt. Doing so provides the radiation dose for the lower body, not the individual's whole-body radiation dose.
- Clip your dosimeter to a shirt sleeve. Doing so provides an inaccurate extremity radiation dose, not the individual's whole-body radiation dose. (Special dosimeters for extremity doses are available and are described below.)
- Keep your dosimeter in a purse, wallet, or vehicle while in a Controlled Area. The radiation exposures recorded then reflect the dose for the purse, wallet, or vehicle, not for the individual.
- Remove the dosimeter elements from their protective plastic case. Doing so may lead to inaccurate measurement of your whole-body dose.
- Take your dosimeter with you when traveling off the SLAC site. If you inadvertently carry your dosimeter with you, *do not* put the dosimeter through a security x-ray machine (such as at the airport). If you carry the dosimeter in a brief case, purse, or carry-on bag, take care to remove the dosimeter from the bag before sending the bag through the security x-ray.
- Take your dosimeter to the offices of either your doctor or dentist. If, during an office visit, you receive an x-ray, radiation therapy, or have a nuclear medicine study done while wearing your dosimeter, immediately notify OHP if you suspect that your dosimeter has been compromised.
- Wear your SLAC dosimeter at another laboratory. Doing so will record radiation from that lab. Your SLAC dosimeter is intended to record any radiation doses you may receive while at SLAC.
- Wear your picture ID in front of your dosimeter. Doing so may prevent an accurate radiation dose reading.

The following figures show the front and back of the SLAC personnel dosimeters:



TLD Dosimeter -- FRONT

TLD Dosimeter -- BACK

Extremity Dosimeters

Dosimeters designed to monitor dose to the extremities (hands and feet) are rarely necessary at SLAC, but may be issued in special cases by OHP. When extremity dosimetry is appropriate for a job, the requirements will be specified on the applicable Radiation Work Permit (RWP) by OHP. Contact OHP if you have any questions about extremity monitoring.

The Dosimetry Program is Everyone's Responsibility

Remember, the purpose of the dosimeter is to monitor your radiation exposure while at SLAC. The effectiveness of the dosimeter depends on the SLAC person who wears it. The dosimeter should never be worn at another facility that monitors for radiation, should not be worn when visiting your doctor or dentist, and must be worn properly to ensure accurate dose measurement.

Kenneth R. Kase, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
02-20-96

SLAC ESH Division Bulletin Index

Page Owner: Ruth McDunn

Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: September 9, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

ES&H Bulletins

- Anti Restart Device -- #39 -- 05/10/95
- Cable Installation -- #37 -- 10/10/94
- Confined Spaces: Policy on Permit Required
  R#25 -- Rescinded, see ES&H Manual Chapter 6
- Contaminated Solid Materials: Requirements for Disposal of -- #17 -- 10/09/91
- Counterfeit and Suspected Counterfeit Parts -- Revised -- #09C -- 03/96
- Dieletric Matting for Electrical Work -- #34 -- 07/05/94
- Dosimeters: Guidelines for Wearing Whole Body and Extremity -- Revised -- #21B -- 02/23/96
- Electrical Findings: Following Up on Tiger Team -- #22 -- 12/20/91
- Electrical Panels: Clearance for -- Availability of Labels -- #05 -- 04/08/91
- Electrical Panels: Clearance for -- NEC Requirements -- #03 -- 03/15/91
- Fire Extinguishers: Portable, at SLAC
  R#12A -- Rescinded, See ES&H Manual Chapter 12
- Food Handling Near Hazardous Substances -- #11 -- 08/07/91
- Footwear: Safety-Toe -- #20A -- 02/22/95
- Gas bottles and Cylinders: Mechanical Restraints for -- #10 -- 08/07/91
- Glasses: Prescription Safety Program -- Revised -- #19B -- 03/08/94
- Hanta Virus -- #38 -- 05/12/95
- Hazard Communication Program Changes
  R#36 -- Rescinded, see ES&H Manual Chapter 4
- Hazardous Materials and Waste: On-site Transportation of -- #35 -- 08/16/94
- Hazardous Waste: Guidelines for Storage of -- #15 -- 09/06/91
- Hoisting and Rigging Policy -- #04 -- 05/16/91
- Hoisting and Rigging Slings: Guidelines for Use of -- #18 -- 10/11/91
- Impaired Employees: Guidelines for Managing -- #29 -- 02/03/93
- Knock-out Boxes and Electrical Clocks: Clarification of Electrical Safety Issues -- #13 -- 08/21/91
- Lead: Policy on Use and Storage of
  R#01A -- Rescinded, see ES&H Manual Chapter 20
- Machine Safeguarding: Guidelines for -- #23 -- 03/06/92
- Medical Monitoring of "Most Exposed" Employees at SLAC and SSRL
  R#16 -- Rescinded, see ES&H Manual Chapter 3
- Mercury Handling Guidelines -- #27 -- 08/06/92
- National Environmental Policy Act: Guidance on the -- #31 -- 06/22/93
- Pocket Ion Chambers: Policy for the use of (PICS) -- #30 -- 02/18/93
- Radiation Dose Information, Policy on Providing -- #32 -- 06/29/93
- Radioactive Materials Management Areas -- Revised -- #14C -- 10/20/94
- Radioactive Sealed Sources: Procedures for -- #33 -- 03/01/94
- Required Management of Hazardous Waste at Small Collection Areas -- #43 -- 08/22/96
- Sharps Containers, Policies and Procedures for Disposal -- #40 -- 07/07/95
- Spider Bites: How to Identify and Treat -- #24 -- 04/24/92
- Stopping Hazardous Operations
  R#08 -- Rescinded, see ES&H Manual Chapter 2
- Stopping Unsafe, Environmentally Damaging, or Illegal Activities -- #42 -- 08/05/96
- Storm Water Pollution Prevention Plan, Best Management Practices -- #41 -- 02/20/96

- Video Display Terminals/Computers: Guidelines for the Use of -- #28 -- 01/05/93
- Waste Minimization and Pollution Prevention Policy
  R#02 -- Rescinded, see ES&H Manual Chapter 22
- Work Hours: Guidance on Limiting -- #26 -- 07/28/92
- Worker Injuries Non-SLAC Personel: Procedures for Handling
  R#06 -- Rescinded, see ES&H Manual Chapter 28
- Worker Injuries SLAC Personnel: Procedures for Handling
  R#07 -- Rescinded, see ES&H Manual Chapter 28

SLAC | ESH Division

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #17
REQUIREMENTS FOR DISPOSAL OF CONTAMINATED SOLID MATERIALS

Every person who works with hazardous materials on the SLAC site is responsible for properly segregating and disposing of waste products generated by the use of those materials. This includes solid materials such as rags, towels, absorbent material, paper or cardboard that have been used or otherwise contaminated with any of the following:

SOLVENTS	OILS AND COOLANTS
Alcohol	Lubricating Oils
Acetone	Motor Oils
Paint Thinners	Grease
Lacquer Thinners	Cutting Fluids
Paint and paint mixes	Coolants
Stoddard and degreasing fluids	Tapping Fluid
TCE	Hydraulic Fluid
Freon	

The distinction between **Solvents** and **Oils and Coolants** defines two groups of generally flammable hazardous materials that ***must be kept separate*** during storage, use, and disposal.

All persons who use or supervise the use of these materials must be aware of and comply with the following requirements:

1. Every workplace using these or similar materials must be equipped with special trash containers identified for disposal of SOLVENT SOLIDS and/or OIL AND COOLANT SOLIDS. These cans have been routinely called Flammable Trash Cans and are usually red in color.
2. These containers **must remain covered** except when materials are being added or the containers are being emptied.
3. These containers **must be labeled** as to their general contents.

4. The containers **must be emptied at the end of each working day** into an appropriate collection drum labeled for SOLVENT SOLIDS or OIL AND COOLANT SOLIDS within a properly established Waste Accumulation Area (WAA). This mixture of combustible solid materials and fluids that will accelerate fire must be dealt with as an increased fire hazard. Therefore, the contents of these cans must not be stored in the work place in great quantities.
5. Persons who use these materials must receive the following training:
    - Instruction from Supervisor on proper use and disposal
    - Hazard Communication Training
    - Hazardous Materials Handling Training
    - Waste Minimization Guidance
6. A complete MSDS for each material used must be available to the exposed workers.

Matthew A. Allen, Associate Director of ES&H
SLAC Environment, Safety, and Health Division
10/9/91

SLAC ESH Division Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #09C
COUNTERFEIT PARTS

This Bulletin supersedes ES&H Bulletin #09B. The Bulletin does *not* apply to bolts made from stainless steel or non-steel material.

The Problem

Counterfeit and suspected counterfeit parts are a problem because they frequently do not meet the standards of the genuine part they imitate and, as a consequence, may be a safety hazard and cause damage to equipment. DOE facilities have reported more than 1,000,000 counterfeit and suspected counterfeit bolts and more than 700 counterfeit and suspected counterfeit circuit breakers.

SLAC Stores will inspect any order shipped to them, but orders that do not go through Stores must be inspected by the purchaser. SLAC personnel who do their own orders must:

- Know how to recognize counterfeit bolts and counterfeit molded-case circuit breakers.
- Avoid purchasing, stocking, or using counterfeit parts.
- Notify Jack Fry of the Safety, Health, and Assurance (SHA) Department, ext. 4512, whenever they suspect that a part is counterfeit.
- Replace pre-installed counterfeit parts, or have them evaluated by a professional engineer on a case-by-case basis, if failure of the part could result in a safety hazard or if the part is mission critical.
- Take counterfeit or suspect counterfeit parts to Alan Conrad, Property Control Group, ext. 2329, Building 28. Be sure to label the box with the words "Counterfeit Parts".

Recognition of Counterfeit Molded-Case Circuit Breakers

Counterfeit molded-case circuit breakers may display one or more of the following signs of refurbishment: Packaging that is outdated, generic, missing the manufacturer's label, or has counterfeit labels Bulk packaging (plastic bag, brown paper bag, or cardboard box with handwritten labels) without an issue date or manufacturer's stamp

- Label containing refurbisher's name rather than manufacturer's name
- Broken, re-attached, or missing manufacturer's seal (which is often multicolored and placed across the two halves of the case)
- Evidence of tampering with wire lugs or connectors (resulting in sun bleaching)
- Nicks or scratches underneath a glossy, as opposed to dull, finish
- Missing rivets, or rivets replaced with wood screws, metal screws, or nuts and bolts
- Contradictory amperage ratings or issue dates on different parts of the same circuit breaker
- Hand-painted amperage, as opposed to embossed or machine-painted amperage

Consult Jack Fry, ext. 4512, before installing a counterfeit or suspect counterfeit circuit breaker in place of a discontinued circuit breaker.

Recognition of Counterfeit Bolts

Counterfeit bolts are hexagonal-headed steel bolts that have grade headmarks 5, 8, 8.2, or A325, but do not meet the mechanical standards of either the Society of Automotive Engineers (SAE) or the American Society for Testing Materials (ASTM). Headmarks can appear on any part of the bolt head. The chart on Page 2 of this Bulletin describes typical characteristics of counterfeit bolts.

COUNTERFEIT BOLT TYPES AND CHARACTERISTICS

Bolts on this list should be withdrawn from service and removed from existing stocks.

If your browser cannot view the following graphics, please look at the original document.

Key: JP= Japan; TW= Taiwan; CA= Canada; YU=Yugoslavia

Type	Marks	Manufacturer	Marks	Manufacturer
Imported, Grade 5 and Grade 8, no manufacturer headmarks	Grade 5		Grade 8	

Type	Marks	Manufacturer	Marks	Manufacturer
Imported, Grade 5, with manufacturer headmarks		Jinn Her (TW)		Kosaka Kohyo (JP)

Type	Marks	Manufacturer	Marks	Manufacturer
Imported, Grade 8, with manufacturer headmarks		Asahi Mfg (JP)		Kosaka Kohyo (JP)
		Nippon Fasteners (JP)		Takai Ltd (JP)
		Hinomoto Metal (JP)		Fastener Co of Japan (JP)
		Minamida Sieybo (JP)		Kyuei Mfg (JP)
		Minato Kohyo (JP)		Jinn Her (JP)
		Infusco (Greater than 1/2 inch; open triangle; JP, CA, TW, YU)		Unytite (JP)
		Dalei (JP)		

Type	Marks	Manufacturer	Marks	Manufacturer
Grade 8.2 with manufacturer headmarks		Kosaka Kohyo (JP)		
Grade A325 (Bennett Denver target only) with manufacturer headmarks (Kosaka Kohyo-JP)	Type 1 Type 2	Kosaka Kohyo (JP)	Type 3	

Kenneth R. Kase, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
3/96

SLAC ESH Division Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #22
FOLLOWING UP ON TIGER TEAM ELECTRICAL FINDINGS

During the recent Tiger Team Assessment, SLAC was cited for numerous electrical violations. The following are examples of the types of violations that were found, and the corrective action that should be taken ***immediately*** *to address the violations:*

FINDING	***CORRECTIVE ACTION***
Old lockout tags which do not comply with current Lock and Tag Procedure.	*Replace old tags with the personalized and dated lockout tags according to the current procedure (Electrical Safety Handbook - ESH 103, Ch. 1).*
Logbook stored inside energized cabinet.	*Remove all stray items stored in energized cabinets.*
Outlet/circuit box covers missing.	*Replace missing covers.*
Openings in electrical panels and boxes which would permit entry of a rod of 1/8" diameter.	*Plug openings to make wiring inaccessible.*
Electrical cords with damaged insulation.	*Replace damaged electrical cords.*
Exposed electrical wiring.	*Correct wiring installation.* *Keep the following rule-of-thumb in mind:* ***Electrical conductors >50 volts must be enclosed or insulated to prevent contact.***
Electrical outlets without GFCIs (Ground Fault Circuit Interrupters) within 6 feet of a water source or building entrance.	*Install GFCIs .*
Extension cords or pendant devices utilizing "knock-out" boxes. (See ES&H Bulletin #13)	*Replace "knock-out" boxes with yellow safety boxes (SLAC Stores #59-400-14).*
"Danger" tags used as "Caution"tags.	*Correct labelling. Only "Caution" tags are to be used in those situations where a system is functional and some precaution is necessary prior to operation. "Danger" tags are to be used to alert personnel to hazards*

that are immediately present. For example, a Caution tag would alert workers that a certain piece of equipment should be locked out before working on the system, whereas a Danger tag would be attached to the locked out device to alert workers that energizing the device may pose an immediate hazard.

Building Managers, Area Managers and Shop Supervisors need to inspect their areas of responsibility and take corrective action. Inspections must be documented and records of corrective action must be retained for future reference. Line Managers (department heads and group leaders) should follow up to ensure that inspections are performed, appropriate corrective actions are taken, and records are maintained.

Matthew A. Allen, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
12/20/91

SLAC ESH Division Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #05
CLEARANCE FOR ELECTRICAL PANELS AVAILABILITY OF LABELS

ES&H Bulletin #03, issued 3/15/91, summarized National Electrical Code requirements for electrical panel clearances. As stated in that Bulletin, if those clearance requirements cannot be met, a label indicating non-compliance must be affixed to the panel front. To assist you in meeting that requirement, two new labels are now available at SLAC Stores. Samples, along with their catalog numbers, are shown below.

Please replace the old "30 inch" labels with the new "36 inch" labels or add "Inadequate Working Clearance" labels as necessary. If you need labels for clearances over 36 inches, you will have to order special labels.

Catalog No. 19-999-007-01

LABEL READS: NO OBSTRUCTION WITHIN 36 INCHES

Catalog No. 19-999-007-02

LABEL READS: CAUTION, INADEQUATE WORKING CLEARANCE, PRIOR TO EXAMINATION, /

SLAC Environment, Safety, and Health Division
4/8/91

SLAC ESH Division Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #03
NATIONAL ELECTRICAL CODE REQUIREMENTS CLEARANCE FOR ELECTRICAL PANELS

	Condition (see below)		
Voltage to Ground	#1	#2	#3
0-150	3 ft.	3 ft.	3 ft.
151-600	3 ft.	3.5 ft.	4 ft.

The clear space shall be at least 6.5 feet high and 30 inches wide. Equipment doors or hinged panels must open to at least 90 degrees.

Exception: Working space is not required in back of assemblies such as dead-front switch boards or motor control centers where there are no renewable or adjustable parts such as fuses or switches on the back and where all connections are accessible from locations other than the back.

Exception: By special permission (from DOE) smaller spaces may be permitted (1) where it is judged that the particular arrangement of the installation will provide adequate accessibility or (2) where all uninsulated parts are at a voltage no greater than 30 volts RMS or 42 Fdc.

	Condition (see below)		
Voltage to Ground	#1	#2	#3
601-2500	3 ft.	4 ft.	5 ft.
2501-9000	4 ft.	5 ft.	6 ft.
9001-25000	5 ft.	6 ft.	9 ft.

The clear space shall be at least 6.5 feet high and 3 feet wide. Equipment doors or hinged panels must open to at least 90 degrees.

Exception: Working space is not required in back of equipment such as dead-front switchboards or control assemblies where there are no renewable or adjustable parts (such as fuses or switches) on the back and where all connections are accessible from locations other than the back. Where rear access is required to work on de-energized parts on the back of enclosed equipment, a minimum working space of 30 inches shall be provided.

Condition #1

Exposed live parts on one side and no live or grounded parts on the other side of the working space or exposed live parts on both sides effectively guarded by suitable wood or other insulating material. Insulated wire or insulated busbars operating at less than 300 volts are not considered live parts.

Condition #2

Exposed live parts on one side and grounded parts on the other side. Concrete, brick or tile walls are considered grounded surfaces.

Condition #3

Exposed live parts on both sides of the work space (not guarded as provided in Condition #1 with the operator between.

If these clearance requirements cannot be met, **A LABEL INDICATING NON-COMPLIANCE MUST BE AFFIXED TO THE PANEL FRONT.** The label is available from Stores and states, "Caution: Inadequate Working Clearance Prior to examination, adjustment, servicing or maintenance of this equipment de-energize following appropriate procedures".

Distribution: Managers, Supervisors, Building Managers

SLAC Environment, Safety, and Health Division
3/15/91

SLAC ESH Division Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #11
FOOD HANDLING NEAR HAZARDOUS SUBSTANCES

Contamination of food, drink, and smoking materials is a potential route for exposure to toxic substances. To avoid this type of exposure:

- Do not store, handle, or eat food in an area where hazardous substances are present.
- Do not use utensils that have been exposed to hazardous substances.
- Do not store food and non-food items in the same refrigerator.
- Identify refrigerators (as well as ice chests, cold rooms, etc.) used for food and those used for non-food substances and label them accordingly. The following signs are available through SLAC Stores.
    - NOTICE: NO FOOD OR DRINK IN THIS AREA (Stores #42-999-010-35)
    - REFRIGERATOR FOR FOOD ONLY: (#42-999-010-36)
    - CHEMICAL STORAGE ONLY: (#42-999-010-37)
- Do not eat, drink, smoke or apply cosmetics in a contaminated work area, or while wearing clothing that is contaminated with hazardous substances (e.g., soiled coveralls).
- Always wash your hands and face thoroughly before eating, drinking, smoking or applying cosmetics.

If you would like more information on this subject, you may wish to consult the publication, *Prudent Practices for Handling Hazardous Chemicals in Laboratories*, by the National Research Council, Committee on Hazardous Substances in the Laboratory. Copies of this book are available in the ES&H Document Room (bldg. 24, room 217, x2341).

Matthew A. Allen, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
8/7/91

SLAC ESH Division Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #20A
PROTECTIVE FOOTWEAR

This bulletin describes revisions to SLAC's policy on protective footwear. This new policy includes changes in regulatory requirements that became effective July 5, 1994; changes in the amount of money that SLAC will reimburse personnel for the purchase of protective footwear; and describes a new procedure for obtaining reimbursement for protective footwear. This Bulletin supersedes ES&H Bulletin #20 that was issued November 21, 1991.

According to the revised OSHA standard (29CFR1910.136):

- Employers must conduct surveys to determine where protective footwear is required.
- Protective footwear is required where there is a risk of injury from crushing caused by rolling or falling objects; from piercing by sharp objects; or where the potential for electrical shock exists.
- The employer must train personnel in the use, limitations, and care of protective footwear.

Determining the Need for Protective Footwear

Managers and supervisors are responsible for surveying and documenting the need for protective footwear. Whenever job duties change, and as part of their required quarterly self-inspection, managers and supervisors should survey their employees' work area to determine if they are at risk of foot injuries. Managers and supervisors may contact a Safety Engineer in the ES&H Division (ext. 3517) for assistance in determining if protective footwear is required in a work area.

Training

Training on protective footwear is available through the ES&H Division Training Team. Course 139, Safety and Health Self-Inspection, includes information designed to assist managers and supervisors in identifying foot hazards in their area. Managers and supervisors must ensure that personnel who wear safety shoes are properly trained in their use, limitations, and care. (For more information, see *Training Opportunities at SLAC*, or call the ES&H Training Team at ext. 2688.)

Reimbursement for the Purchase of Safety Shoes

When protective footwear is *required*, SLAC will reimburse personnel up to $70.00 for the purchase of safety shoes. When protective footwear is *not required*, personnel may *elect* to wear safety shoes and, with the approval of their supervisor, SLAC will provide reimbursement up to $45.00 towards the purchase of safety shoes. All safety shoes must meet the specifications of the American National Standard for Safety-Toe Footwear (ANSI Z41.1-1967).

In order to receive reimbursement for required or elective safety shoes, the *Protective Footwear Approval Form* (attached) must be completed and signed by a manager or supervisor *before* safety

shoes are purchased. (Forms are available from the Petty Cash Office.) The manager or supervisor will indicate on the form whether the safety shoes are required or elective. In order to receive the full reimbursement (up to $70.00) for required safety shoes, or to receive the partial reimbursement (up to $45.00) for elective safety shoes, personnel must attach the completed *Protective Footwear Approval Form* to a completed petty cash slip and a receipt and present the forms to the Petty Cash office.

Kenneth R. Kase, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
2/22/95

SLAC ESH Division Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #19B
PRESCRIPTION SAFETY GLASSES PROGRAM - Revised

SLAC recognizes that appropriate safety practices include providing eye protection to employees who are at risk of eye injury. The Occupational Safety and Health Administration (OSHA) states that eye protection is "required where there is a reasonable probability of injury that can be prevented by such equipment." OSHA further states that persons "whose vision requires the use of corrective lenses in spectacles, and who are required by this standard to wear eye protection, shall wear goggles or spectacles..."

While SLAC may meet these requirements by providing goggles to be worn over spectacles, SLAC chooses to provide prescription safety glasses (at department or group expense) to those who are required by the nature of their work to wear them. This is done through a yearly subcontract with a local optician.

The purchase of all prescription safety glasses is handled through the Occupational Safety and Health (OSH) Department, although the employee's department head or group leader must provide an account number to which the cost of the glasses will be charged. Department heads and group leader decide who within their departments and groups require prescription safety glasses.

SLAC's optician subcontract provides for these basic items:

- Single, bifocal, or trifocal lenses
- Glass, plastic (coated), or polycarbonate lenses
- Plastic or metal frames
- Clear or tinted lenses
- Side shields (clip-on or permanently attached)

Other options, such as photochromic lenses, progressive power lenses, and different safety frame styles than those provided under the subcontract, are available at extra cost to the employee.

All items purchased under this subcontract must meet the ANSI Z87.1 standards. For example, there can be no insertion of non-safety lenses in safety frames or vice versa.

Ordering Prescription Safety Glasses

A copy of the current version of the OSH Prescription Safety Glasses Order Form is attached to this Bulletin. Please retain it and photocopy it as necessary.

The procedure for ordering prescription safety glasses is as follows:

1. Fill out the OSH Prescription Safety Glasses Order Form completely. Make sure that the account number to be charged is legible. The name and mail stop of the employee's department head or group leader (not their authorization signature) must be included on the order form.
2. Mail the completed OSH Prescription Safety Glasses Order Form to Sharon Haynes, SHA Department, MS 84.
3. A SLAC Prescription Safety Glasses Order Form will be prepared and signed off by the OSH Department and mailed to the employee's department head or group leader for authorization/signature. This form is accompanied by an instruction sheet, list of optician's hours, and a copy of the completed OSH Prescription Safety Glasses Order Form. After signing the SLAC Prescription Safety Glasses Order Form, the department head or group leader (or their designee) must separate and distribute the copies as follows:
    - Give copy 2 (Dispenser Copy) and copy 3 (Dispenser Return Copy) of the signed SLAC Prescription Safety Glasses Order Form, and the copy of the OSH Prescription Safety Glasses Order Form to the employee. The employee should take them (along with their previously obtained prescription) to the optician named in the instructions.
    - Mail copy 5 (Purchasing Dept. Copy) to Sharon Haynes, SHA Department, MS 84.
    - Keep copy 4 (Employee Group Copy) for the records of the employee's department or group.

Questions regarding SLAC's prescription safety glasses program should be directed to Sharon Haynes at ext. 4533.

Matthew A. Allen, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
3-8-94

SLAC | ESH Division | Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #10
MECHANICAL RESTRAINTS FOR GAS BOTTLES AND CYLINDERS

Gas cylinders are normally dispensed as single gas bottles or as six-pack stands. All gas cylinders, regardless of the configuration, must be secured against movement as specified in OSHA regulations. Approved and recommended methods for securing cylinders are as follows (in order of preference):

- Metal bands (Stores Item under consideration)
- Chains (Stores Item 42-305-003-02)
- Adjustable straps (Stores Item 42-305-001-04)

Rope or wire restraints are not acceptable. A single-type restraint is permitted. Double chains or straps are not required, but may be used for certain applications. Inspect restraints regularly for wear.

The restraint must be fastened near the upper half of each cylinder (above the center of gravity). The bands, chains or straps must be secured to a restraining structure that must be part of the building or securely attached to the ground. Single gas cylinders that are installed in a six-unit (six-pack) stand must be individually secured to the stand, and the stand must be restrained as well. Gas cylinders in six-packs cannot be free-standing and must be restrained in cages or secured to the building or ground.

Many commercially available gas carts are used at SLAC to transport individual gas cylinders. These carts must be used as suggested by the manufacturer to retain their OSHA approval. These carts are used for portable or temporary storage of gas cylinders and should be replaced whenever possible with permanent structures and restraints.

If operational procedures cannot accommodate the above types of restraints, contact Bryan Harris at ext. 3623 or David Gordon at ext. 2221 to discuss alternative procedures.

All gas cylinders, including cylinders considered empty, must be secured and restrained. Empty cylinders and cylinders not in use must be capped to protect the valves. All gas cylinders must have a status tag or label (empty, full, in use, etc.) attached to or near the cylinder. Any gas cylinder without a status tag or content label should be reported to Jerry Belk at ext. 2484.

Gas cylinders stored in racks must contain the gas identified on the label for that rack (for example, nitrogen may not be stored in a rack labelled for hydrogen). Any improperly stored gas cylinder will be removed if found.

Adequate access must be provided for delivery or exchange of gas cylinders or six-packs. The requestor should ensure that cylinders and stands can be safely moved and that ramps or other means of access are provided. These procedures will help ensure prompt delivery. If restraints are inappropriate, or labels and tags are inadequate, delivery may be delayed or refused.

Note: This Bulletin does not address the chemical safety issues of handling or using gas cylinders.

Matthew A. Allen, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
8/7/91

SLAC ESH Division Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #15
GUIDELINES FOR STORAGE OF HAZARDOUS WASTE

Storage of hazardous waste is regulated by federal, state, and local laws and regulations as well as DOE Orders. Failure to comply with the requirements stated in these regulations can carry severe civil and criminal penalties. To assure that hazardous waste is properly stored at SLAC, the following guidelines are being provided:

Storage Time

Environmental regulations limit the time that hazardous waste can be stored on site. For our facility, waste must be shipped off-site within 90 days from the accumulation start date. In order to allow for time to properly package the waste and arrange for transportation, the Environmental Protection & Waste Management Department (EP&WM) must have all waste containers *in the Hazardous Waste Storage Yard within **45 days** of the accumulation start date*. It is important that this time period is strictly adhered to and that hazardous waste is not stored in a work area for longer than 45 days from the accumulation start date. The fine for storing hazardous waste at our facility for over 90 days can be as high a $25,000 per day per container.

Labeling and Storage Practices

Once a container is designated for storage of hazardous waste, by law it must comply with the following:

1. The container must be marked with the words "Hazardous Waste".
2. The container must be identified as to its contents: e.g., waste solvent or waste PCB contaminated oil.
3. The "accumulation start" date must be on the container. The accumulation start date is the date when the first drop of waste was put into the container.
4. The container must remain closed (sealed) at all times except when adding waste to or removing waste from the container.
5. The container must have secondary containment. The containment must be constructed of a material which is impermeable and compatible with the waste chemical(s), and must be able to contain 110% of the volume of the waste container. If multiple containers are stored within a common secondary containment, the containment must be able to contain 110% of the largest container, and the materials within the common containment must be compatible, i.e., do not store acids and bases within the same secondary containment. Compatibility charts for various chemicals are available through Stores.

In addition to the five items described above the name of a contact person must be labeled on the container. This allows EP&WM personnel to call the individual should any questions arise. Unknown waste must be analyzed to determine its waste characteristics before we can dispose of it. This analytical work can cost as much as $1,000 to 2,000 dollars. That expense must be absorbed by the facility as a cost of operations, which means less dollars for research. If we can call the generator of the

waste when questions arise, we may not have to have the waste analyzed.

Removal of Hazardous Waste from Work Areas

Containers of hazardous waste will be picked up by the EP&WM Department. To have your waste picked up or to request an empty container, submit a completed *Hazardous Waste Pick Up Request Form* to "Hazardous Waste Pick-up, Bin 77". Improperly packaged waste will not be picked up by the EP&WM technicians. For example, the outside of drums must be free of waste residue. Oil on the top of a drum from transfer operations is not acceptable, and will be rejected for pick-up. Another example is waste in containers not suitable for waste. This would include containers such a soda bottles, coffee cans, etc . If you need a container for your waste, please contact the EP&WM Department to assist you in getting one.

Other Information

- If a drum is used to consolidate smaller containers of hazardous waste, each container within the drum must be labeled as described above. The larger drum used for consolidation must also be properly marked, with the accumulation start date being the date on the oldest container placed within the consolidation drum.
- Because hazardous waste containers must remain closed at all times except when adding or removing waste, standard funnels are not to be left in drums. Self closing funnels are available, and can remain on a 55 gallon drum to make waste accumulation easier. Upon request, the EP&WM Department will provide information on where to purchase these funnels.
- It is best to store your hazardous wastes in an area which is protected from the elements. If you must store your waste in an unprotected area which will allow the accumulation of rainwater within the containment, the rainwater must be removed. Because of the possibility that hazardous waste has washed off of the waste containers and contaminated the rainwater within the secondary containment, this water cannot be discharged to the ground. It must first be tested for the constituents which have the potential for contaminating the environment. This will require pumping the rainwater from the secondary containment into a waste drum and collecting a sample for analysis. As mentioned earlier, it is very costly to have samples analyzed, therefore, it is best to prevent the contamination of the rainwater in the first place by storing the waste out of the elements.
- Do ***not*** store hazardous chemicals or wastes near sanitary sewer drains or storm drains.
- Areas which are used for the storage of hazardous waste should be free of debris and clutter. The area should be kept clean.

Inspections of Waste Accumulation Areas

Any area where containers of hazardous waste are stored is considered a Waste Accumulation Area (WAA). By law, WAA's must periodically be inspected. The EP&WM Department is developing guidelines, procedures, and checklists for generators to use to properly manage WAA's and to conduct and document periodic inspections. These materials and training will be provided to appropriate personnel in the near future.

Matthew A. Allen, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
9/6/91

SLAC | ESH Division | Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #04
SLAC HOISTING AND RIGGING POLICY

- There shall be two categories of equipment operators: *Professional Operators* are employees whose major job function is that of equipment operation; *Incidental Operators* are employees whose equipment operation responsibilities are a minor portion of their job responsibilities.
- All SLAC equipment operators, whether *professional operators* or *incidental operators*, will be properly trained, tested and licensed prior to operating equipment at SLAC. Equipment will not be operated by any person not so qualified.
- All *professional operators* and *incidental operators* will have training, testing and re-licensing every three years.
- Lifts at SLAC will be classified as ordinary or special according to procedures developed by the Plant Engineering Department.
- Special lifts will be made only by *professional operators* with a designated person in charge.
- All SLAC equipment (mobile cranes, overhead cranes and hoists, and forklifts) will be given a brief inspection by the equipment operator prior to its first use of the day.
- All SLAC equipment will be thoroughly inspected, maintained and load tested on a routine basis (frequency of inspection shall be determined by usage, but will not be less than annually, nor more than monthly). Written records and an inspection log will be maintained for the daily/first-use inspections, and detailed written records will be kept for the routine inspections and preventive maintenance.
- All slings and lifting fixtures used at SLAC will be designed in accordance with accepted procedures which incorporate appropriate safety factors.
- All slings and lifting fixtures shall have load capacities clearly marked or stencilled on them.
- Slings and lifting fixtures will be subject to an inspection program as outlined above for equipment, daily/first-use brief inspections and periodic thorough inspections, which shall include written records.

Burton Richter, SLAC Director
Matthew A. Allen, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
5/16/91

SLAC | ESH Division | Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #18
GUIDELINES FOR USE OF HOISTING AND RIGGING SLINGS

The following guidelines apply to the use of nylon and wire rope slings at SLAC:

1. Slings that are one (1) year old or more should be destroyed. This is due to the requirement as stated in the DOE Hoisting & Rigging Manual for annual sling inspections, including load testing.
2. In accordance with the SLAC Hoisting & Rigging Policy (see ES&H Bulletin #04), and the DOE Hoisting & Rigging Manual, all slings must be marked with their capacities. Slings not meeting this requirement should be destroyed.
3. The DOE Hoisting & Rigging Manual and OSHA regulations call for slings to have identification tags that show the manufacturer's name, a serial number, sling capacity, and sling weight. Slings not meeting these requirements should be destroyed.
4. Slings which meet the criteria defined in #1, #2, #3 above should be thoroughly inspected to determine their condition. Slings displaying any of the following characteristics from the DOE Hoisting & Rigging Manual should be destroyed:

Nylon slings

- acid or caustic burns
- melting or charring
- snags, punctures, tears, or cuts
- broken or worn stitches
- excessive wear or elongation
- distortion of fittings
- other apparent defects which cause doubt as to the strength of the sling.

Wire rope slings

- broken wires
- 33% reduction from original diameter
- distortion of the rope structure due to kinking, crushing,
- birdcaging", etc.
- heat damage
- damaged end attachments
- hooks that have been opened-up or twisted
- corrosion of the rope or end attachments.

If assistance is needed in determining whether or not slings should be destroyed, contact the Plant Engineering (PE) Rigging Shop (Rich Torres, x2134, pager #11-153 or Elaine Hubbard, x2082, pager #11-153) or the Hoisting & Rigging Safety Committee (Harry Shin, Chairman, x4311, pager

#424-7473).

Slings that need to be destroyed should be delivered to the PE Rigging Shop (Bldg. 124 in the Research Yard). They will be cut, tagged, and taken to Salvage for disposal.

Matthew A. Allen, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
10/11/91

SLAC ESH Division Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #13
CLARIFICATION OF ELECTRICAL SAFETY ISSUES: KNOCK-OUT BOXES AND ELECTRIC CLOCKS

The various safety inspections conducted at SLAC during the past several months have cited a number of electrical safety findings, some of which have led to considerable discussion and controversy. The following discussion is intended to clarify two of these issues.

KNOCK-OUT BOXES

- SURFACE MOUNTED knock-out boxes (also referred to as "punch-out boxes") are permissable under the following conditions:
  - Use indoors only for "general purpose" use.
  - Do not use outdoors or for explosion-proof use.
  - Must be properly grounded.
  - Unused openings must be sealed. A seal is available in
  - Stores for this purpose (stock no. 59-440-014)
  - Must be permanently mounted on the wall or a work-bench.
- Knock-out boxes are NOT permitted for use with extension cords or pendant devices. Instead, use yellow safety boxes (Stores no. 59-400-14).

CLOCKS

The following is a summary of National Electric Code (NEC) requirements.

1. Built-in two wire cord connected, **UL listed** wall clocks **are allowed** because:
   - NEC 110-3(b) allows use of UL listed equipment.
   - NEC 250-45, which requires grounding of certain cord connected equipment, does not include this type of equipment.
   - NEC 400-7(a)(8) allows use of a cord for this kind of equipment.
2. Built-in three wire cord for clocks is **not** necessary because:
   - NEC 250-42, which requires grounding of equipment fastened in place, is not applicable here because clocks are not fastened in place (as interpreted by NFPA).
3. Some clocks come with three wire cord. These clocks provide an extra measure of safety that, while not required by NEC, can prevent injury to persons who may come in contact with the metal parts of the clock.

Matthew A. Allen, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
8/21/91

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #23
GUIDELINES FOR MACHINE SAFEGUARDING

The Occupational Safety and Health Administration (OSHA) requires that machine guarding be provided and maintained in a manner sufficient to protect machine operators and other persons present in machine areas from hazards associated with the operation of machines. Such hazards include those created by points of operation, in-going nip points, rotating parts, flying chips and sparks. The following information is provided to assist machine operators and machine shop supervisors and managers in carrying out their responsibilities for assuring machine safety through hazard identification and evaluation, safeguarding, training, and safe operation.

Types and Points of Hazardous Machine Operations

Motions
Rotating: in-running nip points, spindles, shaft ends, couplings
Reciprocating: back-and-forth, up-and-down
Transverse: movement in a straight, continuous line

Operations
Cutting: bandsaws, drills, milling machines, lathes
Punching: punch presses, notchers
Shearing: mechanical, pneumatic, or hydraulic shears
Bending: press brakes, tube benders, plate rolls

Safeguarding Requirements

Machine safeguards should be installed and maintained to ensure that they:

PREVENT CONTACT
Safeguards must minimize the possibility of the operator or another worker placing their hands into hazardous moving parts.
REMAIN SECURE
Workers should not be able to easily remove or tamper with the safeguard.
PROTECT FROM FALLING OBJECTS
Safeguards should ensure that no objects can fall into moving parts.
CREATE NO NEW HAZARDS
A safeguard defeats its purpose if it creates a hazard of its own.
CREATE NO INTERFERENCE
A safeguard should not create an unacceptable impediment for the worker.
ALLOW SAFE MAINTENANCE AND LUBRICATION
It should be possible to lubricate the machine without removing the safeguard.

Types of Machine Safeguards

- Barriers and guards that prevent contact with machinery
- Mechanical or electronic devices that restrict contact, such as presence-sensing, restraining, or tripping devices, two-hand controls, or gates.
- Feeding and ejection methods that eliminate part handling in the hazard zone.
- Aids such as awareness signs that do not provide physical protection, but warn of a danger area.

Training

Training is a necessary part of any effort to provide safeguarding against machine-related hazards. Supervisors are responsible for providing training to machine operators and maintenance personnel when any new safeguards are put into service or when workers are assigned to a new machine or operation. Training should involve instruction or hands-on training in the following areas:

- A description and identification of the hazards associated with the machine(s).
- A description of the safeguards and their functions.
- Instruction on how to use the safeguards.
- Instruction on how, and under what circumstances safeguards may be removed, and by whom.
- Instruction on what to do if a safeguard is missing, damaged, or inadequate.

Ongoing and Planned Activities at SLAC

The Mechanical Fabrication Department (MFD) is presently conducting a survey to inventory and identify machines and machine operators. This survey will provide the information necessary to determine which types of machine guards should be purchased or fabricated and installed throughout the site, and will help determine priorities for these efforts. The survey will also be used to identify training needs and to form the basis for development of machine safety training. MFD has already begun posting CAUTION signs and other awareness aids throughout the site. Specific information about the survey will be distributed by MFD to Department Heads and Group Leaders. However, a copy of the survey form is attached here to provide others an opportunity to respond if they choose.

Additional Resources

OSHA 3067 - Concepts and Techniques of Machine Safeguarding
29 CFR 1910, Subpart O
ANSI B11.6 and B11.8
SLAC ES&H Manual Chapter 39 (in preparation)

Matthew A. Allen, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
3/6/92

SLAC ESH Division Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #14C
RADIOACTIVE MATERIAL MANAGEMENT AREAS - revised

This Bulletin supersedes ES&H Bulletin #14B and all previously published documents on Radioactive Material Management Areas (RMMAs).

Definitions: RMA and RMMA

A Radioactive Material Area (RMA) is an area where identified radioactive material is stored. All radioactive material stored in an RMA *must* be labeled as radioactive. RMAs are identified with standard yellow and magenta signs and the words "Radioactive Material". Radioactive and non-radioactive materials should not be mixed in an RMA.

A Radioactive Material Management Area (RMMA) is an area in which the potential exists for radioactive contamination due to the presence of unencapsulated or unconfined radioactive material, or exposure to beams of particles capable of causing radioactivation. Not all material in an RMMA will be labeled as radioactive, since items can become activated or contaminated while in the RMMA. Therefore, *allmaterial* must be surveyed by an Operational Health Physics (OHP) technician or an Accelerator Department operator prior to its removal from an RMMA.

This Bulletin:

- Lists the locations of RMMAs at SLAC.
- Provides guidelines for requesting pickup of hazardous waste from RMMAs and non-RMMAs.
- Provides guidelines for salvaging and disposing of non-hazardous waste from RMMAs.

Location of RMMAs

The following areas at SLAC are RMMAs:

- All of the SLAC Accelerator Housings
- End Stations A, B, and Beam Dump East
- Klystron Lab: Accelerator Section Test Assembly (ASTA)
- SSRL: Linac, Booster, and SPEAR Bldg.
- Accelerator Cooling Systems, i.e., resin columns, rope filters, etc.
- Final Focus Test Beam(FFTB) Facility

Temporary RMMA locations may be set up

in the following areas during certain machine or cutting operations.

- Radioactive Material Storage Yard (RAMSY)
- All other areas at SLAC are non-RMMAs.
- Bldg. 25: Light Fabrication Building Areas
- Bldg. 26: Heavy Fabrication Building Areas

All other areas at SLCA are non-RMMAs.

Hazardous-Waste Pickup

To obtain pickup of hazardous waste from RMMAs or non-RMMAs at SLAC, follow the guidelines in the following sections:

Hazardous Waste from Non-RMMAs

For pickup of hazardous waste from non-RMMAs, the generator must fill out the *Hazardous Waste Pickup Request Form/Empty Container Request Form* (SLAC-I-750-0A08R-001) according to the instructions provided on the back of the form. Call ext. 2479 to obtain a form; return the completed form to the Environmental Protection and Waste Management (EP&WM) Department at MS 36.

Hazardous Waste from RMMAs

For pickup of hazardous waste from RMMAs, the generator must fill out the *RMMA Hazardous Waste Pickup Request Form* (SLAC-I-750-0A08R-002) according to the instructions provided on the back of the form. Call ext. 2479 to obtain a form; return the completed form to the EP&WM Department at MS 36.

Non-Hazardous-Waste Salvage and Disposal

To salvage or dispose of non-hazardous waste from RMMAs at SLAC, follow the appropriate guidelines in the following sections.

Non-Hazardous Salvageable Material from RMMAs

Material from RMMAs that is salvageable (such as beam pipe, accelerator components, all metal material, cables, wires, or electronics) may be sent to salvage after the material has been surveyed. The generator must make a list of salvageable material, call Operational Health Physics (OHP) for a survey of the material, submit the list to OHP, and upon approval from OHP, arrange for the material to be delivered to salvage.

Non-Hazardous Waste from RMMAs

This category includes waste such as paper, rubber, plastics, wood with no metals attached, and cloth items. These types of material have a much lower probability of being made radioactive by particle beams than salvageable material. The generator must call OHP for a survey of the waste. Upon approval by OHP, the generator may recycle or dispose of the waste as appropriate.

For Further Assistance

For questions about radioactive material handling or surveys, call Carleton Washington at ext. 3392, or Paul Weaver at ext. 4894.

Matthew A. Allen, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
10/20/94

SLAC ESH Division Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: August 13, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #43
REQUIRED MANAGEMENT OF HAZARDOUS WASTE AT SMALL COLLECTION AREAS

Storage of hazardous waste generated at SLAC is controlled by federal, state, and local regulations. Approximately 60 percent of all hazardous waste generated at SLAC accumulates in large quantities (5 to 55 gallons) in strictly managed designated areas called Waste Accumulation Areas (WAAs). Forty percent of the waste comes from areas that are not designated as WAAs, called small collection areas. None of these collection areas generate quantities greater than a few gallons in a 45-day period. After 45 days from the accumulation start date (the date that the first drop of hazardous waste was placed into the waste container), the waste must be moved to the Hazardous Waste Storage Area (HWSA). The Hazardous Waste Management Group from the Waste Management (WM) Department will transport the waste and prepare it for off-site shipment and disposal.

Each small collection area has minimal requirements that must be followed, regardless of quantity or storage location. These minimal requirements include the following:

1. Hazardous waste must be stored in special containers that can only be obtained from WM.
2. Hazardous waste containers must display the following information on the container:
    - The accumulation start date
    - The words "Hazardous Waste"
    - The full name of the hazardous waste material (such as Acetone or 1,1,1 TCA)
    - The generator's name and telephone number
3. Small collection areas must be inspected weekly by the person or group managing the area. Employees who inspect the areas should check the following:
    - The physical integrity of the hazardous waste containers
    - The chemical compatibility of adjacent hazardous waste (incompatible waste containers should be physically separated)
    - The quantity of waste in the container
    - The container surroundings, in case of spills
    - The container label, for proper labeling requirements
    - The container label date, to determine if the container will soon exceed the maximum 45-day storage requirement.
    - The area's management group must keep the weekly inspection reports. If the waste is ready for transfer to the HWSA, contact Yolanda Pilastro at ext. 3586 for further instructions and to arrange for hazardous waste pickup.
4. Spill cleanup material must be available in the event of a spill. Used cleanup material must be disposed of as hazardous waste.

All personnel who generate, manage, or handle hazardous waste, and their supervisors, must take course # 105, Introduction to Hazardous Waste and Materials Management. For more information on training, contact Ray Jensen at ext. 4296.

To determine your additional training requirements, check the following:

- *Task/Hazard Survey*, also found on the Web at:
  http://www.slac.stanford.edu/esh/training/trainops/marths.html
- *Training Opportunities at SLAC*, or the ES&H Course Catalog Index found on the World Wide Web at:

  http://www.slac.stanford.edu/esh/training/calendar.html

To enroll in training, fill out the form found on the Web or contact the ES&H Training Secretary at ext. 2688.

Kenneth R. Kase, Associate Director for ES&H
8/22/96

SLAC ESH Division Bulletin Index

Page Owner: *Ruth McDunn*
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #24
HOW TO IDENTIFY AND TREAT SPIDER BITES

Dark, damp, still places are ideal homes for all sorts of spiders. They are commonly found at SLAC in tunnels, darkened cabinets, modules, nooks, and crannies. The majority of bites occur between April and October.

Most spiders are harmless and most spider bites are small nuisances that do not need treatment. However, the female black widow spider (Latrodectus mactans), whose shiny black body has a red hourglass-shaped mark on the abdomen, can bite and cause a tender swelling followed by illness. Please note the following possible reactions:

- Typically, a bite from a female black widow causes a reaction similar to that of a mosquito bite except that it is larger, heals more slowly, and is more tender than itchy. If you keep these bites clean with hot soapy water and don't scratch or pick them, they will heal within two weeks.
- Rarely, a black widow bite will result in a severe, post-bite illness characterized by abdominal and generalized muscle cramps, sweating, and nervous hyperactivity. These symptoms require prompt treatment. If you notice you are developing these symptoms shortly after being bitten, go directly to SLAC Medical (extension 2281) or your own doctor. (Remember to tell the doctor that your symptoms followed a spider bite.)

As a preventive measure while you are working in a likely spider habitat, attempt to limit your available skin surface by wearing a tee shirt under a long-sleeved shirt and tucking long trouser legs into your socks.

Margaret Deanesly, M.D., SLAC Physician
Matthew A. Allen, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
4/24/92

SLAC ESH Division Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems

Environment, Safety, & Health Division, Stanford Linear Accelerator Center, Last modified: July 2, 1996

Environment, Safety, and Health
Stanford Linear Accelerator Center

Bulletin #41
STORM WATER POLLUTION PREVENTION PLAN

Storm water runoff carries pollution into creeks, bays, and oceans. SLAC discharges storm water to the San Francisquito Creek which flows to the San Francisco Bay. SLAC must comply with the California General Industrial Activities Storm Water Permit, which is designed to protect waters such as the San Francisquito Creek and San Francisco Bay from runoff pollution.

This Permit requires SLAC to implement a Best Management Practices (BMPs) Program. These BMPs will minimize non-storm water discharges and the pollution of storm water leaving SLAC.

Examples of non-storm water discharges include discharges of fluids from: beam cooling operations; vehicle, tool, and equipment washing; vehicle maintenance (antifreeze, grease, and oil); filter back-washing; saw-cut slurry; construction de-watering; and groundwater. SLAC is in the process of developing and implementing BMPs. Until such time as the BMPs have been finalized, the following management practices shall be performed by all relevant personnel to prevent stormwater pollution.

Equipment and Material Management Practices

1. General Site-wide Practices

Material Handling and Storage

- Store material (including scrap) indoors wherever possible.
- Cover and secure material (including scrap) stored outdoors to the extent possible to contain loose debris.
- Store material in such a way as to contain spills, leaks, or sloughed material.
- Carefully store or handle equipment that contains oil (including scrap and equipment intended for possible future re-use).

Non-Storm Water Discharges

- ***Do not*** discharge anything to the storm drain system other than clean, non-contaminated storm water, unless prior approval is granted by the Environmental Protection and Restoration (EPR) Department.

Good Housekeeping

- Sweep up and dispose of debris as it is generated, and keep dumpster lids closed. Cover open-top debris bins, barrels, and other outdoor containers during inclement weather and when rain or wind is forecast.

Spill Response

- In the event of a spill, immediately contact the Waste Management (WM) Department at ext. 3341. After normal working hours, contact the Fire Department at 9-911.

2. Construction Activities

Dry Season (May through September):

- ***Do not*** discharge anything to the storm drain or to any surface that could release contaminants to the storm drain system. This includes wash water from tools, vehicles, and equipment used for processing and transporting concrete and mortar, or slurry from concrete cutting.
- Dispose of wire snippets, nails, cable ties, metal slugs, paper, and other debris in debris bins as they are generated.
- Inspect the site at the end of the work day. Clean up debris as necessary.

Wet Season (October through April):

- ***Do not*** discharge anything to the storm drain. This includes wash water from tools, vehicles, and equipment used for processing and transporting concrete and mortar, or slurry from concrete cutting.
- Place straw bales in front of catch basins downstream from construction projects to prevent silt and debris from entering the storm drain system. Remove any silt trapped by bales after each storm to prevent the silt from entering the storm drain system.
- Install silt dams downstream from projects with high erosion potential.
- Dispose of wire snippets, nails, cable ties, metal slugs, paper, and other debris in debris bins as they are generated.
- Inspect the site at end of the work day. Clean up any debris and assure that the straw bales are securely in place.
- If rain is imminent, cover tools and equipment with plastic tarp and ensure that the straw bales are in place, free of litter, and that the general area is clean.
- Immediately clean up spills of petroleum products, chemicals, or other substances such as fuel, gear oil from pumping equipment and vehicles, and dry bulk compounds. Immediately report spills to WM at ext. 3341. After normal working hours contact the Fire Department at 9-911.

In order to develop this BMP Program, SLAC has formed a Storm Water Working Group, which is comprised of members from all six SLAC divisions. The mission of the working group is to determine appropriate management practices for the prevention of storm water pollution. Once approved, these management practices will become SLAC policy and will be distributed throughout the site.

All SLAC personnel are expected to comply with Dr. Richter's all-hands memo of 12-12-95, "Illegal Disposal and Discharges to Stormwater Systems". The memorandum states that personnel who witness illegal disposal to the stormwater system are expected to:

- Immediately do what they can to stop such action.
- Call the guards at the Main Gate for assistance.
- Seek the identity of the person or persons responsible for the act.
- Notify the EPR Department at extension 3019.

Burton Richter, Director

Kenneth R. Kase, Associate Director for ES&H
SLAC Environment, Safety, and Health Division
2/20/96

SLAC ESH Division Bulletin Index

Page Owner: Ruth McDunn
Comments, Suggestions, Problems