Stanford Linear Accelerator Center

Radiation Protection Program

Plan for Implementing 10CFR835

ENVIRONMENT, SAFETY, AND HEALTH DIVISION
STANFORD LINEAR ACCELERATOR CENTER
STANFORD UNIVERSITY
STANFORD, CALIFORNIA 94309

SLAC-I-720-1A05M-002-R003

REVISION 3

November 17, 1999
Stanford Linear Accelerator Center
Radiation Protection Program
Plan for Implementing 10 CFR 835

PART 1

Overview
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PART 1
SLAC Radiation Protection Program Plan

1.1 Overview

The Stanford Linear Accelerator Center (SLAC) is submitting this revised Radiation Protection Program Plan (RPP) to comply with the complete amended text, *Title 10 Code of Federal Regulations, Part 835 (10CFR835)*, promulgated November 4, 1998, and implemented December 4, 1998, *Federal Register 63, No. 213*). This revision is to the approved SLAC RPP, dated May 31, 1995, and is consistent with the revised rule (10CFR835, November 4, 1998 version), to be referred to in the remainder of this RPP as 10CFR835. The revised RPP continues to not require any exemptions. The RPP assumes that there will be no additional resources available. New programs identified since the May 31, 1995 RPP are identified in the FY 2001 Environment, Safety and Health (ES&H) Infrastructure and Security Management Plan.

This revision of the SLAC RPP (hereafter known as ‘the RPP’ or ‘the Plan’)) shows that SLAC in this RPP has separated 10CFR835 into 284 individual requirement statements and is fully compliant with 272 of the requirement statements. In addition, SLAC currently is in partial compliance with one 10CFR835 requirement statement and shall be in full compliance with that statement within 180 days of approval of the RPP by the Department of Energy (DOE). The remaining 11 of the requirements are not applicable. Schedules for those items still needing full implementation are given in Section 1.11.

The RPP is divided into three parts: Part 1, which includes Sections 1.0 through 1.14 (which provide background information), Part 2, which is the ALARA Statement, and Part 3, which includes the Requirement, Compliance Statement, and implementation status. In Part 3, the tables for Appendices A, C, D, and E have been left out for brevity.

1.2 General Information

1.2.1 Plan Description

This document is the revised submittal of the SLAC RPP to comply with 10CFR835, as amended. This Radiation Protection Program Plan (RPP) describes, in general terms, the radiological use and protection activities at SLAC. It documents the radiation protection organizational structure and delineates in broad terms the major program components that implement applicable regulations and requirements. This RPP is submitted to DOE, the controlling regulatory agency.
The RPP is designed as a first-tier program description. The RPP, along with any implementing documentation specifically cited by same, will constitute the SLAC regulatory-driven radiation protection commitments. Internal procedures and publications may further articulate and define program detail. The internal SLAC documents are subject to updating and revision without regulatory approval if the general provisions of the RPP continue to be met. Full compliance with 10CFR835 shall be achieved 180 days following approval of the RPP by DOE.

For example, an internal SLAC document that will be used in part to help implement the RPP is the SLAC Radiological Control Manual, referred to hereafter as the RadCon Manual, SLAC-I-720-0A05Z-001-R002. The RadCon Manual is intended to provide acceptable ways to SLAC radiological workers for implementing the requirements of 10CFR835. In addition, the RadCon Manual provides a reference to methodologies and good work practices that radiological workers at SLAC can use in achieving excellence in radiological protection over and above the requirements of 10CFR835.

The RPP covers all radiological activities and all facilities and operations at SLAC. The RPP encompasses the accelerator facilities, machine shops, research laboratories, and service buildings. All activities that produce personnel radiation exposure are covered by the RPP.

Part 3 of the RPP lists the individual regulations from 10CFR835 along with their compliance statements. The compliance status is also indicated for each compliance statement. If the facility is not in full compliance, the document changes required to come into compliance will be completed by the required full implementation date. Full compliance for all applicable requirements is projected by 180 days after approval of the RPP, as required by 10CFR835.101(f). For requirements that are not applicable, justification is provided.

1.2.2 Definitions

SLAC definitions for key terms found in the attached Implementation Plan are shown here:

1.2.2.1 Statutory

Imposed by law, such as United States Statutes at Large or the United States Code (U.S.C.); for purposes of the RPP, the Price-Anderson Amendments Act (PAAA) of 1988 is the statute which establishes the general terms and conditions for compliance with the law’s
requirements. Statute is to be distinguished from regulations, which are
an agency’s implementation of the specific procedures which the
agency requires to help ensure the carrying out of the purpose of the
statute, such as an implementation plan. Although SLAC is not subject
to PAAA civil penalties because there are no nuclear facilities on site,
compliance with the regulations in 10CFR835 is necessary to conduct
operations at SLAC. For this reason, the term “mandatory” as defined
below shall be substituted for the term “statutory” for generating a
SLAC implementation plan (that is, the RPP) compliant with the
regulations as may be agreed to by the University.

1.2.2.2 Mandatory

Containing or constituting a command, order, or obligation, whether
imposed by law or by agreement by SLAC to incorporate certain
elements into an implementation plan (that is, the RPP). The word
“shall” is to be used when a procedure or action is mandatory.

1.2.2.3 Guidance

The act or process of guiding, advising, or providing direction, such as
recommending programs to help ensure compliance with 10CFR835.
The word “should” is to be used when a procedure or action is for
guidance.

1.2.2.4 Not Applicable

The requirement addresses an issue or activity that does not take place
at SLAC.

1.2.2.5 Full Compliance

A program is in place that will or does result in satisfaction of the
essential elements of either 1) a statutory or mandatory requirement, or
2) a set of mutually agreed upon but non-mandatory actions.

1.2.2.6 Partial Compliance

A radiological protection program is in place at SLAC. SLAC is in full
compliance with the current RPP. In most cases current work practices
are consistent with the 10CFR835 amended requirements. However,
the implementing document(s) may not fully satisfy the amended
statutory or mandatory requirements. In such case, a schedule is
developed to ensure application of sufficient resources within a
specified time frame (180 days after approval of the RPP by the DOE)
to bring the program into full compliance with all statutory and
mandatory requirements.
1.2.2.7 Implementation Plan

The Implementation Plan details how SLAC will meet the requirements of the DOE regulations in 10CFR835. Part 3 of the RPP constitutes the Implementation Plan. The ‘details’ are specific references in the Implementation Plan to the passage or passages in the RadCon Manual or other SLAC document where SLAC demonstrates compliance with the commitment. From the information provided in the Implementation Plan, it should be clear which of the following three categories applies to each requirement at SLAC:

a. The requirement is applicable and the Implementation Plan defines the actions and schedules for compliance;
b. the requirement is applicable and an exemption is being requested; or
c. the requirement is not applicable for the reasons documented in the Implementation Plan.

1.3 Facility Description and Operations

1.3.1 Mission

The Stanford Linear Accelerator Center (SLAC) is a national research facility, operated by Stanford University under contract to the Department of Energy (DOE). As an element of the DOE National Laboratory and Center System, its fundamental mission is to provide national scientific leadership and technological innovation to support DOE objectives in fundamental science, energy research and environmental quality. The SLAC mission can be summarized as follows:

- Perform world-class research in high-energy physics and using synchrotron radiation
- Provide accelerators, detectors, instrumentation, and support for national and international research programs in elementary particle physics and allied fields that use synchrotron radiation.
- Advance the art of accelerators and related devices through the development of more sources of high-energy particles and synchrotron radiation, plus new techniques for their scientific utilization.
- Advance the critical technologies necessary to maintain leadership and excellence in particle physics, accelerator physics, and synchrotron radiation.
- Transfer practical knowledge and innovative technology to the private sector.
- Contribute to the education of the next generation of scientists and engineers, and to the scientific awareness of the public.
- Achieve and maintain excellence in matters of environmental concern and provide for the safety and health of its staff and the general public.
The SLAC mission supports the DOE mission to "ensure that the United States sustains its leadership in science and technology," as enunciated in the DOE Strategic Plan.

1.3.2 SLAC Operations

To support the national infrastructure for fundamental science and engineering research, SLAC provides a range of unique facilities for research in particle physics, accelerator physics, and synchrotron radiation by SLAC investigators and users from industry, universities and government. The major User facilities at SLAC that utilize or produce radiation are:

1.3.2.1 Stanford Linear Collider/SLC Large Detector

Construction of the SLC began in 1983 and was completed in 1989. The SLC served both as a test bed for new accelerator technique and as a facility to reach the energy region where the Z⁰ particle could be produced in quantity and in a simple environment. The linear accelerator (linac) could produce 50 GeV beams of both electrons and positrons. Positrons were created and transported back for injection into the linac. In 1992 the SLC began operating with a polarized electron source. In 1993, more than 50,000 Z⁰s were produced with a polarized electron beam. The SLD was a state-of-the-art detector operating at the SLC at the Z⁰ mass. This detector began operating in May 1991. The original mission was completed in FY 98. The SLD data analysis is continuing to the present time.

1.3.2.2 Stanford Synchrotron Radiation Laboratory (SSRL)

SSRL carries out research using extremely intense vacuum ultraviolet, soft x-ray, and x-ray radiation. Twenty-four experimental stations provide beams whose spectra are continuous and whose intensities are approximately seven orders of magnitude greater than more classical sources. The principal areas of experimental research are vacuum ultraviolet and soft x-ray studies of atoms, molecules, and solids; x-ray studies of condensed matter; and structural molecular biology studies using x-rays. In addition to scientific research, SSRL is committed to developing advanced insertion devices for enhancing synchrotron radiation and developing state-of-the-art instrumentation for using synchrotron radiation.

1.3.2.3 End Station A
End Station A consists of a fixed-target spectrometer and computing facilities to allow experiments to be set up and conducted in relatively short time periods at modest cost and input.

### 1.3.2.4 Next Linear Collider Final Focus Test Beam (NLCFFTB) and Test Accelerator (NLCTA)

The NLCFFTB, which is located in the straight-ahead channel at the end of the SLC linac, uses as input the unique SLC electron beam with its very small emittance at 50 GeV. It is a prototype magnetic optical system capable of producing the small beam spots required for the next generation of linear collider.

The NLCTA is housed in End Station B in a configuration that allows access to an overhead crane. The NLCTA consists of a 42-meter beamline, including an injector, a linac and a spectrometer. The injector includes a 150-kV gridded thermionic-cathode gun, an X-band prebuncher, a capture section, and a preacceleration section.

### 1.3.2.5 The Positron-Electron Storage Ring (PEP-II)

PEP has been upgraded to serve as a facility, dubbed the Asymmetric B Factory or PEP-II, that will produce millions of B mesons. Proposed by a group of scientists from SLAC, the Lawrence Berkeley National Laboratory, and the Lawrence Livermore National Laboratory, the B Factory is an extensive modification and upgrade of the previous PEP machine. The high-energy ring, which stores a 9-GeV electron beam, is an upgrade of the previous PEP collider; it reutilizes all of the PEP magnets and incorporates a state-of-the-art copper vacuum chamber and a new radio-frequency system capable of supporting a stored beam of high current. The low-energy ring, which stores 3.1-GeV positrons, was newly constructed. Injection is achieved by extracting electrons and positrons at collision energies from the linac and transporting each in a dedicated bypass line. The collider was completed in July 1998. Operation of the PEP-II program with the BaBar detector is expected by the end of 1999.

### 1.3.2.6 Other Radiological Facilities

This category includes locations not normally visited by SLAC Users such as the Radioactive Material Storage Yard (RAMSY) and the Radioactive Waste Storage Area (RWSA).
Any radiological facilities at SLAC that may be added or modified over the life of this RPP also are captured by this Section.

1.4 Safety Principles, Management, and Administration

1.4.1 Integrated Safety Management System (ISMS)

The SLAC commitment to integrating ES&H considerations into its mission preceded the establishment of the DOE ISMS requirements. This commitment is evident in the strong ES&H Program developed by SLAC long before the ISMS clause was incorporated into the operating contract.

1.4.2 Objective of the SLAC Management System

SLAC is devoted to experimental and theoretical research in elementary particle physics, in basic sciences using synchrotron radiation, and in accelerator physics and technology.

As stated in Chapter 1 of the ES&H Manual, to accomplish this mission, SLAC must “integrate safety and environmental protection into its management and work practices at all levels so that the mission is accomplished while protecting the worker, the public, and the environment.” This objective is the foundation of the SLAC ES&H Program.

1.4.3 ES&H Programs

SLAC communicates the ISMS objective to the SLAC site through the ES&H orientation programs and the Work Smart Standards (WSS). Orientation programs vary, depending on the work to be performed and the hazards that may be encountered.

The primary responsibility for safety at SLAC rests with the Director of SLAC. The Director of SLAC ensures that the Laboratory operates in a manner that is environmentally responsible and that provides a safe and healthy work place.

The ES&H Division provides technical assistance, coordination and oversight of the ES&H program.

The ES&H Coordinating Council is responsible for:

- Formulating ES&H policy and recommending it to the Director of SLAC.
- Reviewing and monitoring the status of the ES&H program.
- Ensuring that the necessary resources are applied to the program and that established policies are implemented.
1.4.4 Institutional Functions

At the institutional level, the SLAC WSS are addressed through SLAC-wide policies and procedures. For radiological protection, these policies and procedures include the following: a) the primary radiological control policy at SLAC is the ES&H Manual (SLAC-I-720-70100-100), b) the primary implementation document is the RadCon Manual, and c) policies and procedures of secondary importance may include portions of the SLAC Guidelines for Operations, (SLAC Document # 01-01-01-04), SLAC Radiation Safety Systems Technical Basis Document (SLAC-I-720-0A05Z-002), SLAC External Dosimetry Technical Basis Document (SLAC-I-760-0A07Z-002) SLAC Internal Dosimetry Technical Basis Document (SLAC-I-760-0A07Z-003), and SLAC Quality Assurance and Compliance Department Oversight Procedures (SLAC-I-770-0A19C-001).

Core ES&H functions performed at the institutional level include an integrated hazards assessment and the selection of the WSS, based on the identified hazards. Through the audit process SLAC ensures compliance with applicable radiological regulations and requirements.

1.4.5 Work Level Functions

Scientific investigators, managers, and supervisors are required to consider the ES&H hazards, risks and concerns present, and to implement safety requirements. They are required to assure that employees working under them know how to perform the work safely and in conformance with applicable SLAC ES&H requirements, and to provide on-the-job training as necessary. All employees, visitors, and participating guests are expected to comply with ES&H requirements in their work. Individual workers must carry out radiological work in a safe manner and in compliance with regulations and SLAC safety policies as well as within authorization restrictions.

1.4.6 Resources

The core radiation protection program at SLAC is managed through the Associate Director for ES&H (ES&H Division). The radiation protection functions are carried out in two departments within the Division. The Radiation Physics Department consists of radiation physicists, whose primary functions are accelerator radiation containment as well as radiation and personnel safety systems. The Operational Health Physics (OHP) Department, consists of health physicists, health physics technicians, and administrative support staff, whose functions include radioactive material shipping and receiving, handling of radioactive waste; and establishing, implementing and monitoring the compliance of adequate radiological work and materials controls. In addition, other technical staff perform duties in environmental monitoring and dosimetry.
Facilities and capabilities in direct support of the radiological protection program include:

1.4.6.1 The Radiation Dosimetry Laboratory

This facility provides dosimetry service for external (whole body and extremity), and area workplace monitoring (using passive detectors). The external dosimetry program is DOELAP-accredited and uses thermoluminescent dosimeters (TLDs) for beta, gamma, and neutron monitoring for both individual and area monitoring. Extremity monitoring utilizes TLD material in the form of finger rings.

Historically, radiological conditions at SLAC have resulted in no known significant intakes of radioactivity. Moreover, current and future conditions are not anticipated to result in any increase in the potential for significant intakes of radioactivity. Accordingly, SLAC elects not to pursue DOELAP-accreditation for its internal dosimetry program unless and until changing radiological conditions warrant. SLAC respectfully requests concurrence from DOE to not DOELAP-accredit its internal dosimetry program at this time. SLAC will submit a technical justification for not seeking this accreditation to DOE by 06/30/2000. SLAC will DOELAP-accredit its internal dosimetry program in the future if actual or anticipated changes in operational conditions warrant.

Unless and until SLAC establishes a DOELAP-accredited internal dosimetry program, in-vivo and in-vitro radiobioassay measurement services will be obtained from other DOE-regulated laboratories or an accredited commercial laboratory.

1.4.6.2 Instrumentation, Calibration and Maintenance Capability

OHP repairs and calibrates many of its fixed and portable radiation survey instruments onsite. Portable neutron survey instruments are sent to Lawrence Livermore National Laboratory for calibration. OHP maintains all calibration and maintenance records. OHP maintains NIST-traceable beta, gamma and neutron sealed sources for instrument calibration and as dosimetry standards.

1.4.6.3 Environmental Monitoring

External radiation environmental monitoring is conducted by OHP and the dosimeters are evaluated by an accredited commercial vendor. SLAC has the capability of monitoring effluent from its accelerator facilities as necessary for specific operations. Soil, ground water and wastewater are sampled and radiological measurements are made to assess regulatory compliance.
1.5 Safety and Implementation Guides and Technical Standards

DOE standards (DOE STD-1027-92 and DOE STD-1082-94) were used in preparing the RPP but do not constitute any part of the RPP. The 10CFR835 Implementation Guides were referred to in the construction of the RPP but were not specifically cited in the actions/documentation shown for attaining full compliance for any part of the RPP.

1.6 Baseline

Level of compliance, that is, fully compliant, not applicable, or partially compliant is identified for each requirement. A brief summary of the SLAC ALARA program is provided in the SLAC ALARA Statement. The SLAC ALARA Committee and Radiation Safety Committee charters are provided in the ES&H Manual (SLAC-I-720-70100-100, Chapter 31, Citizen Committees) but that document is noted as a reference and is not submitted as a part of this RPP. In addition, the RadCon Manual is noted as a reference, and does not in its entirety constitute a part of this RPP.
1.7 Additional Activities

Actions and documentation needed to achieve full compliance for each partial compliance item are shown in Part 3 of the RPP.

1.8 Graded Approach

The actions and documentation identified are believed to be of an appropriate magnitude for a radiological facility with the sources of radiation exposure and quantities of radioactive material known to exist at SLAC, that is, a “Low-Hazard Radiological Facility.”

Although General Radiological Worker Training (GERT) is not defined in the current revision of 10CFR835, SLAC commits to prohibiting non-SLAC-GERT-trained individuals from entering any Radiological Area or Radioactive Material Area at SLAC.

1.9 Resource Assessment

As noted in 1.1, no additional resources have been identified beyond those shown in 1.4.6.

1.10 Prioritization

The schedules provided in Part 3 of the RPP indicate the relative prioritization given to the completion necessary for full compliance.

1.11 Milestones and Schedules

The schedule for the task of upgrading documentation is one to ensure full compliance by 180 days after approval of the RPP by DOE. The major milestones are: submittal of the RPP to DOE by June 2, 1999, approval by DOE of the RPP within 180 days of submittal, and final changes to applicable policies and implementing documents within 180 days after acceptance of the RPP by DOE.

The SLAC RPP will be enacted by 12/31/99.

The inclusion of the cumulative TEDE for radiological workers in their individual dose reports per 10CFR835.702c.5.iii will be enacted by 12/31/99.

A technical justification for not DOELAP-accrediting the SLAC internal dosimetry program (as otherwise required by 10CFR835.402(d)(1)) at this time will be submitted to DOE by 06/30/2000.

1.12 Exemptions

As noted above, SLAC is submitting no exemptions with the RPP.
1.13 Compensatory Actions

Not applicable.

1.14 Tracking

The completion of the RPP will be tracked using the existing Corrective Action Management System (CAMS) tracking system maintained by the SLAC Program Planning Office (PPO), a part of the ES&H Division, and by the update and maintenance of the database in the ES&H Division Office.
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Stanford Linear Accelerator Center

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PART 2

SLAC ALARA Statement
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SLAC ALARA STATEMENT

Since its inception, SLAC has had a policy of maintaining radiation exposures to workers and the general public as low as practical. This policy has meant that historically SLAC has always controlled doses to levels below the maximums allowed by regulations. This concept as applied worldwide has become known as the ALARA (as low as reasonably achievable) policy and is one of the main radiation guidelines at SLAC.

The criteria for shielding design for new facilities at SLAC shall be that the total effective dose equivalent outside the shield shall not exceed 20% of the regulatory limit. Actual measured doses have been even smaller. The internal guidelines for operational exposure control as given in the SLAC Radiological Control Manual are consistent with the practices seen at large accelerator facilities. Beyond the prescribed numbers, however, SLAC policy is to reduce doses even more whenever it is reasonable to do so.

In keeping with this ALARA policy, any SLAC employee who becomes aware of areas and/or work practices where radiation exposures may be unnecessarily high, even though they may be within legal limits, should contact the SLAC Radiological Control Manager or the SLAC Radiation Safety Officer.

Policy.

The goal of SLAC is to establish commitment and participation at all management and workforce levels. To accomplish this goal, SLAC has established programs in the following areas:

1. Training.
SLAC requires training for personnel involved with any aspect of radiological operations.

2. Design.

SLAC ensures integration of appropriate methods for maintaining occupational exposure ALARA during design.

3. Procedures.

SLAC provides direction for maintaining occupational exposures ALARA.

4. Planning.

SLAC integrates measures for maintaining occupational exposures ALARA for specific operations.

5. Internal Audits.

SLAC conducts comprehensive audits periodically and reports results to the highest management levels.


SLAC maintains documentation to demonstrate compliance.

Implementing Documents:

SLAC utilizes the portions of the following documents specifically referenced in the Actions/Documentation entries in Part 3 of the Radiological Protection Plan to establish compliance with 10CFR835:

- SLAC Environment, Safety, and Health Manual (SLAC-I-720-70100-100 current version),
• SLAC Radiological Control Manual  
  (SLAC-I-720-0A05Z-001 current version), and  
• SLAC Radiological Work Controls Manual, Chapter 11  
  (SLAC-I-760-2A05O-009)
Stanford Linear Accelerator Center

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PART 3

Compliance Statements and Implementation Documentation
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10CFR835:  1(a)IRECTION: Full Compliance  

Scope: (a) General. The rules in this part establish radiation protection standards,  
limits, and program requirements for protecting individuals from ionizing radiation  
resulting from the conduct of DOE activities.  

( ) Statutory  
(X) Mandatory  
( ) Guidance  

COMPLIANCE STATEMENT:  
SLAC has established radiation protection standards, limits, and program requirements for  
protecting individuals from ionizing radiation resulting from the conduct of SLAC  
activities consistent with the rules in this part.  

ACTIONS/DOCUMENTS:  
SLAC shall submit its RPP plan by June 2, 1999  

Headquarters Technical Reviewer:  
Operations Office Technical Reviewer:  

Headquarters Program Reviewer:  
Operations Office Technical Reviewer:  

Surveillance Number:  
Review Number:  

10CFR835:  1(a) End.
10CFR835: 1(b) 01  STATUS: Not Applicable

Scope: (b) Exclusion. Except as discussed in paragraph (c) of this section, the requirements in this part do not apply to:
(1) Activities that are regulated through a license by the Nuclear Regulatory Commission or a State under Agreement with the Nuclear Regulatory Commission, including activities certified by the Nuclear Regulatory Commission under section 1701 of the Atomic Energy Act;
(2) Activities conducted under the authority of the Director, Naval Nuclear Propulsion Program, as described in Public Law 98-525;
(3) Activities conducted under the Nuclear Explosives and Weapons Surety Program relating to the prevention of accidental or unauthorized nuclear detonations;

COMPLIANCE STATEMENT:
SLAC does not have programs regulated by the NRC, Naval Nuclear Propulsion Program, or the Nuclear Explosives and Weapons Surety Program.

ACTIONS/DOCUMENTS:
None

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1(b) 01 End
10CFR835: 1(b) 02

STATUS: Full Compliance

Scope: (b) Exclusion. Except as discussed in paragraph (c) of this section, the requirements in this part do not apply to:
(4) Radioactive material transportation as defined in this part;
(5) DOE activities conducted outside the United States on territory under the jurisdiction of a foreign government to the extent governed by occupational radiation protection requirements agreed to between the United States and the cognizant government; or
(6) Background radiation, radiation doses received as a patient for the purposes of medical diagnosis or therapy, or radiation doses received from participation as a subject in medical research programs.

() Statutory
() Mandatory
(X) Guidance

COMPLIANCE STATEMENT:
SLAC shall exclude from its RPP the requirements in this part: Scope: (b) Exclusion. Specified in (4), (5), and (6), except as discussed in paragraph (c) of 10 CFR 835.1,

ACTIONS/DOCUMENTS:
None

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1(b) 02 End.
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MAIN FACILITY

10CFR835: 1(c) 01 STATUS: Full Compliance

Scope: (c) Occupational doses received as a result of excluded activities and radioactive material transportation, as listed in paragraphs (b)(1) through (b)(5) of this section, shall be considered when determining compliance with the occupational dose limits at §§ 835.202 and 835.207, and

() Statutory
(X) Mandatory
() Guidance

COMPLIANCE STATEMENT:

Occupational doses received as a result of excluded activities and radioactive material transportation, as listed in paragraphs (b)(1) through (b)(5) of this section, shall be considered when determining compliance with the occupational dose limits at §§ 835.202 and 835.207, and

ACTIONS/DOCUMENTS:
   SLAC RadCon Manual Article 213.1.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1(c) 01 End
10CFR835: 1(c) 02  STATUS: Full Compliance

Scope: (c) Occupational doses resulting from authorized emergency exposures and planned special exposures shall not be considered when determining compliance with the dose limits at §§ 835.202 and 835.207.

( ) Statutory  
(X) Mandatory  
( ) Guidance

COMPLIANCE STATEMENT:

Occupational doses resulting from authorized emergency exposures and planned special exposures shall not be considered when determining compliance with the dose limits at §§ 835.202 and 835.207.

ACTIONS/DOCUMENTS:

SLAC RadCon Manual Article 213.3.G (2)
SLAC RadCon Manual Article 2 Appendix 2A

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1(c) 02 End
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[10CFR835:  2(a)   STATUS: Full Compliance]

**The definitions as used in this part**

( ) Statutory
(X) Mandatory
( ) Guidance

**COMPLIANCE STATEMENT:**
SLAC accepts the definitions as used in this part.

**ACTIONS/DOCUMENTS:**
SLAC *RadCon Manual* Glossary and Article 414.1

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Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835:  2(a) End.
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10CFR835:  2(b)                        STATUS: Full Compliance

The definitions as used in this part to describe various aspects of radiation dose.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
SLAC accepts the definitions as used in this part to describe various aspects of a radiation
dose.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Glossary.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835:  2(b) End.
10/15/1999   STANFORD LINEAR ACCELERATOR CENTER
            MAIN FACILITY

10CFR835: 2(c)            STATUS: Full Compliance

Terms defined in the Atomic Energy Act and not defined in this part are used consistent with the meaning given in the Act.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Terms defined in the Atomic Energy Act and not defined in 10 CFR 835 are used consistent with the meaning given in the Act.

ACTIONS/DOCUMENTS:
None

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 2(c) End.
10CFR835: 3(a)  

STATUS: Full Compliance

No person or DOE personnel shall take or cause to be taken any action inconsistent with the requirements of:

(1) This part; or
(2) Any program, plan, schedule, or other process established by this part.

(X) Mandatory

COMPLIANCE STATEMENT:

No SLAC or DOE personnel SHALL take or cause to be taken any action inconsistent with the requirements of:

(1) 10 CFR 835; or
(2) Any program, plan, schedule, or other process established by 10 CFR 835.

ACTIONS/DOCUMENTS:
Radiological Safety, Chapter 9, Appendix A. \textit{SLAC ES&H Manual} (SLAC-I-720-70100-100): "No SLAC or DOE personnel shall take or cause to be taken any action inconsistent with the requirements of:

(1) Title 10 CFR 835; or
(2) Any program, plan, schedule, or other process established by Title 10 CFR 835."

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 3(a) End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 3(b)  STATUS: Full Compliance

With respect to a particular DOE activity, contractor management shall be
responsible for compliance with the requirements of this part.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
With respect to a particular DOE activity, SLAC management SHALL be responsible for
compliance with the requirements of 10 CFR 835.

ACTIONS/DOCUMENTS:
Radiological Safety, Chapter 9, Appendix A.  *SLAC ES&H Manual* (SLAC-I-720-70100-
100): "With respect to a particular DOE activity, SLAC management shall be
responsible for compliance with the requirements of Title 10 CFR 835."

Headquarters Technical Reviewer:  Operations Office Technical Reviewer:

Headquarters Program Reviewer:  Operations Office Technical Reviewer:

Surveillance Number:  Review Number:

10CFR835: 3(b) End.
10/15/1999   STANFORD LINEAR ACCELERATOR CENTER
            MAIN FACILITY

10CFR835: 3(c)   STATUS: Not Applicable

Where there is no contractor for a DOE activity, DOE shall ensure implementation of and compliance with the requirements of this part.

( ) Statutory
( ) Mandatory
(X) Guidance

COMPLIANCE STATEMENT:
Stanford University is the contractor for SLAC, a Government Owned Contractor Operated (GOCO) facility. SLAC is not a Government Owned Government Operated (GOGO) facility, hence Title 10 CFR 835.3(c) does not apply.

ACTIONS/DOCUMENTS:
None.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 3(c) End.
Nothing in this part shall be construed as limiting actions that may be necessary to protect health and safety.

(X) Mandatory

COMPLIANCE STATEMENT:
Nothing in 10 CFR 835 SHALL be construed as limiting actions that may be necessary to protect health and safety.

ACTIONS/DOCUMENTS:
Radiological Safety, Chapter 9, Appendix A. SLAC ES&H Manual (SLAC-I-720-70100-100): "Nothing in this manual or in Title 10 CFR 835 shall be construed as limiting actions that may be necessary to protect health and safety."

10CFR835: 3(d) End.
For those activities that are required by Parts 835.102, 835.901(e), 835.1202(a), and 835.1202(b), the time interval to conduct these activities may be extended by a period not to exceed 30 days to accommodate scheduling needs.

(a) Statutory
(b) Mandatory
(X) Guidance

COMPLIANCE STATEMENT:
For those activities that are required by Parts 835.102, 835.901(e), 835.1202(a), and 835.1202(b), the time interval to conduct these activities may be extended by a period not to exceed 30 days to accommodate scheduling needs.

ACTIONS/DOCUMENTS:
Radiological Safety, Chapter 9, Appendix A, SLAC ES&H Manual (SLAC-I-720-70100-100): "For those activities that are required by Parts 835.102, 835.901(e), 835.1202(a), and 835.1202(b), the time interval to conduct these activities may be extended by a period not to exceed 30 days to accommodate scheduling needs."
Unless otherwise specified, the quantities used in the records required by this part shall be clearly indicated in special units of curie, rad, roentgen or rem, including multiples and subdivisions of these units. The SI units, becquerel (Bq), gray (Gy), and sievert (Sv), are only provided parenthetically in this part for reference with scientific standards.

() Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Unless otherwise specified, the quantities used in the records required by this part SHALL be clearly indicated in special units of curie, rad, roentgen, or rem, including multiples and subdivisions of these units.

ACTIONS/DOCUMENTS:
Radiological Safety, Chapter 9, Appendix A. SLAC ES&H Manual (SLAC-I-720-70100-100): "Unless otherwise specified, the quantities used in the records required by Title 10 CFR 835 shall be clearly indicated in special units of curie, roentgen, rad, or rem, including multiples and subdivisions of these units. The SI units, becquerel (Bq), gray (Gy), and sievert (Sv), are only provided parenthetically in 10 CFR 835 for reference with scientific standards."
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10CFR835: 101(a) STATUS: Full Compliance

A DOE activity shall be conducted in compliance with a documented radiation protection program (RPP) as approved by the DOE.

( ) Statutory
( X ) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
SLAC activities SHALL be conducted in compliance with a documented radiation protection program (RPP) as approved by the DOE.

ACTIONS/DOCUMENTS:
Radiological Safety, Chapter 9, Appendix A. *SLAC ES&H Manual* (SLAC-I-720-70100-100): "SLAC activities shall be conducted in compliance with a documented radiation protection program (RPP) as approved by the DOE."

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 101(a) End.
The DOE may direct or make modifications to a RPP.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The DOE MAY direct or make modifications to a RPP.

ACTIONS/DOCUMENTS:
Radiological Safety, Chapter 9, Appendix A. SLAC ES&H Manual (SLAC-I-720-70100-100): "The DOE may direct or make modifications to SLAC's RPP."

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 101(b) End.
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10CFR835: 101(c).01 STATUS: Full Compliance

The content of each RPP shall be commensurate with the nature of the activities performed and shall include formal plans and measures for applying the as low as reasonably achievable (ALARA) process to occupational exposure.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The content of SLAC's RPP SHALL be commensurate with the nature of the activities performed and

ACTIONS/DOCUMENTS:
The SLAC RPP addresses each requirement in 10CFR835.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 101(c).01 End.
The content of each RPP shall be commensurate with the nature of the activities performed and shall include formal plans and measures for applying the as low as reasonably achievable (ALARA) process to occupational exposure.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The content of SLAC’s RPP SHALL include formal plans and measures for applying the as low as reasonably achievable (ALARA) process to occupational exposure.

ACTIONS/DOCUMENTS:
The SLAC RPP addresses each requirement in 10CFR835.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 101(c).02 End.
The RPP shall specify the existing and/or anticipated operational tasks that are intended to be within the scope of the RPP.

COMPLIANCE STATEMENT:
SLAC's RPP SHALL specify the existing and/or anticipated operational tasks that are intended to be within the scope of the RPP.

ACTIONS/DOCUMENTS:
The SLAC RPP addresses each requirement in 10CFR835.
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10CFR835: 101(d) 02  STATUS: Full Compliance

Except as provided in § 835.101(h), any task outside the scope of a RPP shall not be 
initiated until an update of the RPP is approved by DOE.

( ) Statutory  
(X) Mandatory  
( ) Guidance  

COMPLIANCE STATEMENT:
Except as provided in §835.101(h), any task outside the scope of an RPP SHALL not be initiated until an updated RPP is approved by DOE.

ACTIONS/DOCUMENTS:
The SLAC RPP addresses each requirement in 10CFR835.

Headquarters Technical Reviewer:  Operations Office Technical Reviewer:

Headquarters Program Reviewer:  Operations Office Technical Reviewer:

Surveillance Number:  Review Number:

10CFR835: 101(d).02 End.
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10CFR835: 101(e)   STATUS: Full Compliance

The content of the RPP shall address, but shall not necessarily be limited to, each requirement in this part.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The content of SLAC's RPP SHALL address, but SHALL not necessarily be limited to, each requirement in this part.

ACTIONS/DOCUMENTS:
The SLAC RPP addresses each requirement in 10CFR835.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 101(e) End.
The RPP shall include plans, schedules, and other measures for achieving compliance with regulations of this part.

COMPLIANCE STATEMENT:
SLAC’s RPP SHALL include plans, schedules, and other measures for achieving compliance with regulations of this part.

ACTIONS/DOCUMENTS:
The draft RPP was completed and submitted on May 28, 1999. Four actions are incomplete as of the date of this filing. They are:

1) Biannual review of the Internal Dosimetry Technical Basis Document (TBD),
2) Upgrade the Air Sampling Program to incorporate action levels for posting and continuous air sampling,
3) Development of a procedure for calibrating air sampling equipment and analyzing air filters, and
4) Inclusion of cumulative Total Effective Dose Equivalent (TEDE) on the individual radiation dose reports for radiation workers for TEDEs received beginning 01/01/89.

SLAC will complete all of these actions by 12/31/99.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 101(f).02  
STATUS: Full Compliance

Unless otherwise specified in this part, compliance with amendments to this part shall be achieved no later than 180 days following approval of the revised RPP by DOE.

( ) Statutory  
(X) Mandatory  
( ) Guidance

COMPLIANCE STATEMENT:  
Compliance with amendments to this part SHALL be achieved no later than 180 days following approval of the revised RPP by DOE.

ACTIONS/DOCUMENTS:  
The SLAC RPP addresses each requirement in 10CFR835.

Headquarters Technical Reviewer:  
Operations Office Technical Reviewer:

Headquarters Program Reviewer:  
Operations Office Technical Reviewer:

Surveillance Number:  
Review Number:

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10CFR835: 101(f).03    STATUS: Full Compliance

Compliance with the requirements of § 835.402(d) for radiobioassay program
accreditation shall be achieved no later than January 1, 2002

() Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Compliance with amendments to this part SHALL be achieved no later than January 1,
2002.

ACTIONS/DOCUMENTS:
SLAC shall be in compliance with the requirements of §835.402(d) no later than
January 1, 2002 or shall for its internal dose monitoring programs implemented to
demonstrate compliance with §835.402(c) submit samples to laboratories accredited in
accordance with the DOE Laboratory Accreditation Program for Radiobioassay.

The extensive operational and technological experience gathered at SLAC has shown no
known intakes of radioactivity to date. By default, no SLAC worker ever has received
100 rem or more of Committed Effective Dose Equivalent (CEDE) internal dose from a
SLAC intake. Current expectations are that the likelihood of any intakes occurring in the
future at SLAC is negligible.

Unless future operational data indicates otherwise, establishment of a
DOELAP-accredited Internal Dosimetry Program at SLAC is unnecessary.

Headquarters Technical Reviewer:  Operations Office Technical Reviewer:

Headquarters Program Reviewer:  Operations Office Technical Reviewer:

Surveillance Number:  Review Number:

An update of the RPP shall be submitted to DOE: Whenever a change or an addition to the RPP is made;

(X) Mandatory

COMPLIANCE STATEMENT:
An update of SLAC’s RPP SHALL be submitted to DOE: Whenever a change or an addition to the RPP is made;

ACTIONS/DOCUMENTS:
The SLAC RPP addresses each requirement in 10CFR835.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 101(g)(1) End.
An update of the RPP shall be submitted to DOE: Prior to the initiation of a task not within the scope of the RPP; or

COMPLIANCE STATEMENT:
An update to SLAC’s RPP SHALL be submitted to DOE: Prior to the initiation of a task not within the scope of the RPP; or

ACTIONS/DOCUMENTS:
The SLAC RPP addresses each requirement in 10CFR835.
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10CFR835: 101(g)(3)     STATUS: Full Compliance

An update of the RPP shall be submitted to DOE: Within 180 days of the effective date of any modifications to this part.

(X) Statutory

COMPLIANCE STATEMENT:
An update of SLAC's RPP SHALL be submitted to DOE: Within 180 days of the effective date of any modifications to this part.

ACTIONS/DOCUMENTS:
The SLAC RPP addresses each requirement in 10CFR835.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 101(g)(3) End.
Changes, additions, or updates to the RPP may become effective without prior Department approval only if the changes do not decrease the effectiveness of the RPP and the RPP, as changed, continues to meet the requirements of this part.

COMPLIANCE STATEMENT:
Changes, additions, or updates to SLAC's RPP MAY become effective without prior Department approval only if the changes do not decrease the effectiveness of the RPP and the RPP, as changed, continues to meet the requirements of this part.

ACTIONS/DOCUMENTS:
The SLAC RPP addresses each requirement in 10CFR835.
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10CFR835:  101(h).02  STATUS: Full Compliance

Proposed changes that decrease the effectiveness of the RPP shall not be implemented without submittal to and approval by the Department.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Proposed changes that decrease the effectiveness of the RPP SHALL not be implemented without submittal to and approval by the Department of Energy.

ACTIONS/DOCUMENTS:
The SLAC RPP addresses each requirement in 10CFR835.

Headquarters Technical Reviewer:  Operations Office Technical Reviewer:

Headquarters Program Reviewer:  Operations Office Technical Reviewer:

Surveillance Number:  Review Number:

10CFR835:  101(h).02 End.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
             MAIN FACILITY

10CFR835:  101(i)                      STATUS: Full Compliance

An initial RPP or an update shall be considered approved 180 days after its
submission unless rejected by DOE at an earlier date.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The initial SLAC RPP or a subsequent update SHALL be considered approved 180 days
after its submission unless rejected by DOE at an earlier date.

ACTIONS/DOCUMENTS:
The SLAC RPP addresses each requirement in 10CFR835.

Headquarters Technical Reviewer:   Operations Office Technical Reviewer:

Headquarters Program Reviewer:   Operations Office Technical Reviewer:

Surveillance Number:   Review Number:

10CFR835:  101(i) End.
Internal audits of the radiation protection program, including examination of program content and implementation, shall be conducted through a process that ensures that all functional elements are reviewed no less frequently than every 36 months.

COMPLIANCE STATEMENT:
Internal audits of the radiation protection program, including examination of program content and implementation, SHALL be conducted through a process that ensures that all functional elements are reviewed no less frequently than every 36 months.

ACTIONS/DOCUMENTS:
Radiological Safety, Chapter 9, Appendix A. \textit{SLAC ES\&H Manual} (SLAC-I-720-70100-100): "The Safety, Health, and Assurance (SHA) Department’s audit procedures shall ensure that internal audits of the radiation protection program, including examination of program content and implementation, shall be conducted through a process that ensures that all functional elements are reviewed no less frequently than every 36 months." And SLAC \textit{RadCon Manual} Article 134.1.
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            MAIN FACILITY

10CFR835: 103.01  STATUS: Full Compliance

**Individuals responsible for developing measures necessary for ensuring compliance with the requirements of this part shall have the appropriate education, training and skills to discharge these responsibilities.**

( ) Statutory
(X) Mandatory
( ) Guidance

**COMPLIANCE STATEMENT:**
Individuals responsible for developing measures necessary for ensuring compliance with the requirements of this part SHALL have the appropriate education, training and skills to discharge these responsibilities.

**ACTIONS/DOCUMENTS:**

Headquarters Technical Reviewer: 
Operations Office Technical Reviewer:

Headquarters Program Reviewer: 
Operations Office Technical Reviewer:

Surveillance Number: 
Review Number:

10CFR835: 103.01 End.
10/15/1999   STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835:  103.02     STATUS:  Full Compliance

**Individuals responsible for implementing measures necessary for ensuring compliance with the requirements of this part shall have the appropriate education, training and skills to discharge these responsibilities.**

( ) Statutory
(X) Mandatory
( ) Guidance

**COMPLIANCE STATEMENT:**
Individuals responsible for implementing measures necessary for ensuring compliance with the requirements of this part SHALL have the appropriate education, training and skills to discharge these responsibilities.

**ACTIONS/DOCUMENTS:**
SLAC *RadCon Manual* Articles 142, 143, 642, 652, 653, and 654.

Headquarters Technical Reviewer:       Operations Office Technical Reviewer:

Headquarters Program Reviewer:         Operations Office Technical Reviewer:

Surveillance Number:                   Review Number:

10CFR835:  103.02 End.
Written procedures shall be developed and implemented as necessary to ensure compliance with this part, commensurate with the radiological hazards created by the activity and.

COMPLIANCE STATEMENT:
Written procedures SHALL be developed and implemented as necessary to ensure compliance with 10 CFR 835 commensurate with the radiological hazards created by the activity and.

ACTIONS/DOCUMENTS:
Radiological Safety, Chapter 9.7 Controlling Hazards, and Appendix A SLAC ES&H Manual (SLAC-I-720-70100-100): “The personnel Protective System and administrative procedures are the measures most directly used by SLAC radiological workers.” and “Written procedures shall be developed and implemented as necessary to ensure compliance with 10 CFR 835 consistent with the education, training, and skills of the individuals exposed to those hazards.” And SLAC RadCon Manual Article 551.3
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10CFR835: 104.02  STATUS: Full Compliance

Written procedures shall be developed and implemented as necessary to ensure compliance with this part consistent with the education, training, and skills of the individuals exposed to those hazards.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Written procedures SHALL be developed and implemented as necessary to ensure compliance with 10 CFR 835 consistent with the education, training, and skills of the individuals exposed to those hazards.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Articles 312.2, 312.5, 315.1, and 322.0.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 104.02 End.
10/15/1999 STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 202(a)(1) STATUS: Full Compliance

Except for planned special exposures conducted consistent with § 835.204 and emergency exposures authorized in accordance with § 835.1302, the occupational dose received by general employees shall be controlled such that the following limits are not exceeded: (1) A total effective dose equivalent of 5 rems (0.05 sievert);

() Statutory
(X) Mandatory
() Guidance

COMPLIANCE STATEMENT:
Except for planned special exposures conducted consistent with §835.204 and emergency exposures authorized in accordance with §835.1302, the occupational dose received by general employees SHALL be controlled such that the following limits are not exceeded: (1) A total effective dose equivalent of 5 rems (0.05 sievert);

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.1 and Chapter 2, Table 2-1.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 202(a)(1) End.
Except for planned special exposures conducted consistent with § 835.204 and emergency exposures authorized in accordance with § 835.1302, the occupational dose received by general employees shall be controlled such that the following limits are not exceeded: (2) The sum of the deep dose equivalent for external exposures and the committed dose equivalent to any organ or tissue other than the lens of the eye of 50 rems (0.5 sievert).

COMPLIANCE STATEMENT:
Except for planned special exposures conducted consistent with §835.204 and emergency exposures authorized in accordance with §835.1302, the occupational dose received by general employees SHALL be controlled such that the following limits are not exceeded: (2) The sum of the deep dose equivalent for external exposures and the committed dose equivalent to any organ or tissue other than the lens of the eye of 50 rems (0.5 sievert).

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.1 and Chapter 2, Table 2-1.
10CFR835: 202(a)(3) STATUS: Full Compliance

**COMPLIANCE STATEMENT:**
Except for planned special exposures conducted consistent with § 835.204 and emergency exposures authorized in accordance with § 835.1302, the occupational dose received by general employees shall be controlled such that the following limits are not exceeded: (3) A lens of the eye dose equivalent of 15 rems (0.15 sievert); and

**ACTIONS/DOCUMENTS:**
SLAC RadCon Manual Article 213.1 and Chapter 2, Table 2-1.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 202(a)(4)  STATUS: Full Compliance

Except for planned special exposures conducted consistent with § 835.204 and emergency exposures authorized in accordance with § 835.1302, the occupational dose received by general employees shall be controlled such that the following limits are not exceeded: (4) A shallow dose equivalent of 50 rems (0.5 sievert) to the skin or to any extremity.

() Statutory  (X) Mandatory  () Guidance

COMPLIANCE STATEMENT:
Except for planned special exposures conducted consistent with §835.204 and emergency exposures authorized in accordance with §835.1302, the occupational dose received by general employees SHALL be controlled such that the following limits are not exceeded: (1) A shallow dose equivalent of 50 rems (0.5 sievert) to the skin or to any extremity.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213 and Table 2-1.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 202(b) 01 STATUS: Full Compliance

All occupational exposure received during the current year, except doses resulting from planned special exposures conducted in compliance with § 835.204 and emergency exposures authorized in accordance with § 835.1302, shall be included when demonstrating compliance with § 835.202(a) and

(X) Mandatory
( ) Statutory
( ) Guidance

COMPLIANCE STATEMENT:
All occupational exposure received during the current year, except doses resulting from planned special exposures conducted in compliance with §835.204 and emergency exposures authorized in accordance with §835.1302, SHALL be included when demonstrating compliance with §835.202(a) and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.1.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 202(b) 01 End.
All occupational exposure received during the current year, except doses resulting from planned special exposures conducted in compliance with § 835.204 and emergency exposures authorized in accordance with § 835.1302, shall be included when demonstrating compliance with § 835.207.

COMPLIANCE STATEMENT:
All occupational exposure received during the current year, except doses resulting from planned special exposures conducted in compliance with §835.204 and emergency exposures authorized in accordance with §835.1302, SHALL be included when demonstrating compliance with §835.207.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.1 and Chapter 2, Table 2-1.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 202(b) 02 End.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER    
MAIN FACILITY

10CFR835: 202(c)    STATUS: Full Compliance

Doses from background, therapeutic and diagnostic medical radiation, and participation as a subject in medical research programs shall not be included in dose records or in the assessment of compliance with the occupational dose limits.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Doses from background, therapeutic and diagnostic medical radiation, and participation as a subject in medical research programs SHALL not be included in dose records or in the assessment of compliance with the occupational dose limits.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual  Table 2.1, Footnote 3.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 202(c) End.
The total effective dose equivalent during a year shall be determined by summing the effective dose equivalent from external exposures and the committed effective dose equivalent from intakes during the year.

COMPLIANCE STATEMENT:
The total effective dose equivalent during a year SHALL be determined by summing the effective dose equivalent from external exposures and the committed effective dose equivalent from intakes during the year.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213, Table 2.1, footnote **.
10/15/1999      STANFORD LINEAR ACCELERATOR CENTER
               MAIN FACILITY

10CFR835: 203(b)   STATUS: Full Compliance

Determinations of the effective dose equivalent shall be made using the weighting factor values provided in § 835.2.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Determinations of the effective dose equivalent SHALL be made using the weighting factor values provided in §835.2.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2 Definition of weighting factor values in Appendix 2B.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 203(b) End.
A planned special exposure may be authorized for a radiological worker to receive doses in addition to and accounted for separately from the doses received under the limits specified in §835.202(a), provided that each of the following conditions is satisfied: The planned special exposure is considered only in an exceptional situation when alternatives that might prevent a radiological worker from exceeding the limit in §835.202(a) are unavailable or impractical;

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COMPLIANCE STATEMENT:
A planned special exposure may be authorized for a radiological worker to receive doses in addition to and accounted for separately from the doses received under the limits specified in §835.202(a), provided that each of the following conditions IS SATISFIED: The planned special exposure is considered only in an exceptional situation when alternatives that might prevent a radiological worker from exceeding the limit in §835.202(a) are unavailable or impractical;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.3.

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Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 204(a)(1) End.
A planned special exposure may be authorized for a radiological worker to receive doses in addition to and accounted for separately from the doses received under the limits specified in § 835.202(a), provided that each of the following conditions is satisfied: The contractor management (and employer, if the employer is not the contractor) specifically requests the planned special exposure, in writing; and

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
A planned special exposure may be authorized for a radiological worker to receive doses in addition to and accounted for separately from the doses received under the limits specified in §835.202(a), provided that each of the following conditions IS SATISFIED: SLAC management (and employer, if the employer is not SLAC) specifically requests the planned special exposure, in writing; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.3.
A planned special exposure may be authorized for a radiological worker to receive doses in addition to and accounted for separately from the doses received under the limits specified in §835.202(a), provided that each of the following conditions is satisfied: Joint written approval is received from the appropriate DOE Headquarters program office and the Secretarial Officer responsible for environment, safety and health matters.

COMPLIANCE STATEMENT:
A planned special exposure may be authorized for a radiological worker to receive doses in addition to and accounted for separately from the doses received under the limits specified in §835.202(a), provided that each of the following conditions is SATISFIED: Joint written approval is received from the appropriate DOE Headquarters program office and the Secretarial Officer responsible for environment, safety and health matters.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.3.
Prior to requesting an individual to participate in an authorized planned special exposure, the individual's dose from all previous planned special exposures and all doses in excess of the occupational dose limits shall be determined.

COMPLIANCE STATEMENT:
Prior to requesting an individual to participate in an authorized planned special exposure, the individual's dose from all previous planned special exposures and all doses in excess of the occupational dose limits SHALL be determined.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.3.D.
10/15/1999      STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY (1)

10CFR835: 204(c)(1) STATUS: Full Compliance

An individual shall not receive a planned special exposure that, in addition to the
doses determined in § 835.204(b), would result in a dose exceeding the following: In
a year, the numerical values of the dose limits established at § 835.202(a), and

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
An individual SHALL not receive a planned special exposure that, in addition to the doses
determined in §835.204(b), would result in a dose exceeding the following: In a year, the
numerical values of the dose limits established at §835.202(a), and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.3.E.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 204(c)(1) End.
10/15/1999       STANFORD LINEAR ACCELERATOR CENTER
                MAIN FACILITY

10 CFR 835: 204(c)(2)        STATUS: Full Compliance

An individual shall not receive a planned special exposure that, in addition to the
doses determined in § 835.204(b), would result in a dose exceeding the following:
Over the individual's lifetime, five times the numerical values of the dose limits
established at § 835.202(a).

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
An individual SHALL not receive a planned special exposure that, in addition to the
doses determined in § 835.204(b), would result in a dose exceeding the following: Over
the individual's lifetime, five times the numerical values of the dose limits established at
§835.202(a).

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.3.E (2).

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10 CFR 835: 204(c)(2) End.
Prior to a planned special exposure, written consent shall be obtained from each individual involved.

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COMPLIANCE STATEMENT:
Prior to a planned special exposure, written consent SHALL be obtained from each individual involved.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.3.F.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 204(d) End.
Prior to a planned special exposure, written consent shall be obtained from each individual involved. Each such written consent shall include: The purpose of the planned operations and procedures to be used;

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Prior to a planned special exposure, written consent shall be obtained from each individual involved. Each such written consent SHALL include: The purpose of the planned operations and procedures to be used;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.3.F

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 204(d)(1) End.
Prior to a planned special exposure, written consent shall be obtained from each individual involved. Each such written consent shall include: The estimated doses and associated potential risks and specific radiological conditions and other hazards which might be involved in performing the task; and

(A) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Prior to a planned special exposure, written consent shall be obtained from each individual involved. Each such written consent SHALL include: The estimated doses and associated potential risks and specific radiological conditions and other hazards which might be involved in performing the task; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.3.F (2).

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 204(d)(2) End.
Prior to a planned special exposure, written consent shall be obtained from each individual involved. Each such written consent shall include: Instructions on the measures to be taken to keep the dose ALARA considering other risks that may be present.

COMPLIANCE STATEMENT:
Prior to a planned special exposure, written consent shall be obtained from each individual involved. Each such written consent SHALL include: Instructions on the measures to be taken to keep the dose ALARA considering other risks that may be present.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.3.F(3).

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 204(d)(3) End.
Records of the conduct of a planned special exposure shall be maintained and a written report submitted within 30 days after the planned special exposure to the approving organizations identified in § 835.204(a)(3).

COMPLIANCE STATEMENT:
Records of the conduct of a planned special exposure SHALL be maintained and a written report submitted within 30 days after the planned special exposure to the approving organizations identified in § 835.204(a)(3).

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.3.G.
The dose from planned special exposures is not to be considered in controlling future occupational dose of the individual under § 835.202(a), but is to be included in records and reports required under this part.

| ( ) Statutory | (X) Mandatory | ( ) Guidance |

COMPLIANCE STATEMENT:
The dose from planned special exposures is not to be considered in controlling future occupational dose of the individual under §835.202(a), but IS TO BE INCLUDED in records and reports required under this part.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.3.H &722.11.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 204(f) End.
Non-uniform exposures of the skin from X-rays, beta radiation, and/or radioactive material on the skin are to be assessed as specified in this section.

COMPLIANCE STATEMENT:
Non-uniform exposures of the skin from X-rays, beta radiation, and/or radioactive material on the skin ARE TO BE assessed as specified in this section.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2C.
10/15/1999      STANFORD LINEAR ACCELERATOR CENTER  
MAIN FACILITY  

10CFR835:  205(b)(1) STATUS: Full Compliance

For purposes of demonstrating compliance with § 835.202(a)(4), assessments shall be conducted as follows: Area of skin irradiated is 100 cm² or more. The non-uniform dose equivalent received during the year shall be averaged over the 100 cm² of the skin receiving the maximum dose, added to any uniform dose equivalent also received by the skin, and recorded as the shallow dose equivalent to any extremity or skin for the year.

( ) Statutory  
(X) Mandatory  
( ) Guidance

COMPLIANCE STATEMENT:
For purposes of demonstrating compliance with §835.202(a)(4), assessments SHALL be conducted as follows: Area of skin irradiated is 100 cm² or more. The non-uniform dose equivalent received during the year SHALL be averaged over the 100 cm² of the skin receiving the maximum dose, added to any uniform dose equivalent also received by the skin, and recorded as the shallow dose equivalent to any extremity or skin for the year.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2C.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10 CFR 835: 205(b)(1) End.
For purposes of demonstrating compliance with § 835.202(a)(4), assessments shall be conducted as follows: Area of skin irradiated is 10 cm² or more, but is less than 100 cm². The non-uniform dose equivalent (H) to the irradiated area received during the year shall be added to any uniform dose equivalent also received by the skin and recorded as the shallow dose equivalent to any extremity or skin for the year. H is the dose equivalent averaged over the 1 cm² of skin receiving the maximum absorbed dose, D, reduced by the fraction f, which is the irradiated area in cm² divided by 100 cm² (i.e., H=fD). In no case shall a value of f less than 0.1 be used.

COMPLIANCE STATEMENT:
For purposes of demonstrating compliance with §835.202(a)(4), assessments SHALL be conducted as follows: Area of skin irradiated is 10 cm² or more, but is less than 100 cm². The non-uniform dose equivalent (H) to the irradiated area received during the year SHALL be added to any uniform dose equivalent also received by the skin and recorded as the shallow dose equivalent to any extremity or skin for the year. H is the dose equivalent averaged over the 1 cm² of skin receiving the maximum absorbed dose, D, reduced by the fraction f, which is the irradiated area in cm² divided by 100 cm² (i.e., H=fD). In no case SHALL a value of f less than 0.1 be used.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2C.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 205(b)(2) End.
For purposes of demonstrating compliance with § 835.202(a)(4), assessments shall be conducted as follows: Area of skin irradiated is less than 10 cm². The non-uniform dose equivalent shall be averaged over the 1 cm² of skin receiving the maximum dose. This dose equivalent shall: (i) Be recorded in the individual's occupational exposure history as a special entry; and (ii) Not be added to any other shallow dose equivalent to any extremity or skin recorded as the dose equivalent for the year.
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**10CFR835: 206(a)**

**The dose equivalent limit for the embryo/fetus from the period of conception to birth, as a result of occupational exposure of a declared pregnant worker, is 0.5 rem (0.005 sievert).**

- ( ) Statutory
- (X) Mandatory
- ( ) Guidance

**COMPLIANCE STATEMENT:**
The dose equivalent limit for the embryo/fetus from the period of conception to birth, as a result of occupational exposure of a declared pregnant worker, IS 0.5 rem (0.005 sievert).

**ACTIONS/DOCUMENTS:**
SLAC RadCon Manual Chapter2, Table 2-1 and Article 215.2.A

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**10CFR835: 206(a) End.**
10/15/1999      STANFORD LINEAR ACCELERATOR CENTER
               MAIN FACILITY

10CFR835: 206(b) STATUS: Full Compliance

Substantial variation above a uniform exposure rate that would satisfy the limits
provided in §835.206(a) shall be avoided.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Substantial variation above a uniform exposure rate that would satisfy the limits provided
in §835.206(a) SHALL be avoided.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 215.2.B.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 206(b) End.
If the dose equivalent to the embryo/fetus is determined to have already exceeded 0.5 rem (0.005 sievert) by the time a worker declares her pregnancy, the declared pregnant worker shall not be assigned to tasks where additional occupational exposure is likely during the remaining gestation period.

COMPLIANCE STATEMENT:
If the dose equivalent to the embryo/fetus is determined to have already exceeded 0.5 rem (0.005 sievert) by the time a worker declares her pregnancy, the declared pregnant worker SHALL not be assigned to tasks where additional occupational exposure is likely during the remaining gestation period.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 215.3.
The dose equivalent limits for minors occupationally exposed to radiation and/or radioactive materials at a DOE activity are 0.1 rem (0.001 sievert) total effective dose equivalent in a year and 10% of the occupational dose limits specified at § 835.202(a)(3) and (a)(4).

COMPLIANCE STATEMENT:
The dose equivalent limits for minors occupationally exposed to radiation and/or radioactive materials at SLAC ARE 0.1 rem (0.001 sievert) total effective dose equivalent in a year and 10% of the occupational dose limits specified at § 835.202(a)(3) and (a)(4).

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Table 2-1.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 207 End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
           MAIN FACILITY

10CFR835: 208  STATUS: Full Compliance

The total effective dose equivalent limit for members of the public exposed to
radiation and/or radioactive material during access to a controlled area is 0.1 rem
(0.001 sievert) in a year.

( ) Statutory  (X) Mandatory  ( ) Guidance

COMPLIANCE STATEMENT:
The total effective dose equivalent limit for members of the public exposed to radiation
and/or radioactive material during access to a controlled area at SLAC is 0.1 rem
(0.001 sievert) in a year.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 2, Table 2-1 and Article 214.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number:  Review Number:

10CFR835: 208 End.
10/15/1999 STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 209(a) STATUS: Full Compliance

The derived air concentration (DAC) values given in appendices A and C of this part shall be used in the control of occupational exposures to airborne radioactive material.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The derived air concentration (DAC) values given in appendices A and C of 10 CFR 835 SHALL be used in the control of occupational exposures to airborne radioactive material.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 223.2.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 209(a) End.
The estimation of internal dose shall be based on bioassay data rather than air concentration values unless bioassay data are:
(1) unavailable;
(2) inadequate; or
(3) internal dose estimates based on air concentration values are demonstrated to be as or more accurate.

COMPLIANCE STATEMENT:
The estimation of internal dose SHALL be based on bioassay data rather than air concentration values unless bioassay data are:
(1) unavailable;
(2) inadequate; or
(3) internal dose estimates based on air concentration values are demonstrated to be as or more accurate.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 223.2 & 521.2.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 209(b) End.
10/15/1999 STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 401(a)(1) STATUS: Full Compliance

Monitoring of individuals and areas shall be performed to: Demonstrate compliance with the regulations in this part;

(X) Mandatory

COMPLIANCE STATEMENT:
Monitoring of individuals and areas SHALL be performed to: Demonstrate compliance with the regulations in this part;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 511 and 514.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 401(a)(1) End.
10/15/1999 STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 401(a)(2) STATUS: Full Compliance

Monitoring of individuals and areas shall be performed to: Document radiological
conditions;

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Monitoring of individuals and areas SHALL be performed to: Document radiological
conditions;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 511, 514, and 551.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 401(a)(2) End.
Monitoring of individuals and areas shall be performed to: Detect changes in radiological conditions;

(X) Statutory
( ) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Monitoring of individuals and areas SHALL be performed to: Detect changes in radiological conditions;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 511, 514, and 551.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

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<td>Monitoring of individuals and areas shall be performed to: Detect the gradual buildup of radioactive material;</td>
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(X) Mandatory

COMPLIANCE STATEMENT:
Monitoring of individuals and areas SHALL be performed to: Detect the gradual buildup of radioactive material;

ACTIONS/DOCUMENTS:
SLAC *RadCon Manual* Article 511.
10/15/1999  
STANFORD LINEAR ACCELERATOR CENTER  
MAIN FACILITY  

10CFR835: 401(a)(5)  
STATUS: Full Compliance  

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<th>Guidance</th>
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**COMPLIANCE STATEMENT:**  
Monitoring of individuals and areas SHALL be performed to: Verify the effectiveness of engineering and process controls in containing radioactive material and reducing radiation exposure; and  

**ACTIONS/DOCUMENTS:**  
SLAC *RadCon Manual* Article 511, 514, and 551.

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Headquarters Technical Reviewer:  
Operations Office Technical Reviewer:  

Headquarters Program Reviewer:  
Operations Office Technical Reviewer:  

Surveillance Number:  
Review Number:  

10CFR835: 401(a)(5) End
. 10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
         MAIN FACILITY

10CFR835:  401(a)(6)   STATUS: Full Compliance

**Monitoring of individuals and areas shall be performed to: Identify and control potential sources of individual exposure to radiation and/or radioactive material.**

( ) Statutory
(X) Mandatory
( ) Guidance

**COMPLIANCE STATEMENT:**
Monitoring of individuals and areas SHALL be performed to: Identify and control potential sources of individual exposure to radiation and/or radioactive material.

**ACTIONS/DOCUMENTS:**
SLAC *RadCon Manual* Article 511 and 514.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835:  401(a)(6) End.
10/15/1999 STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 401(b)(1) STATUS: Full Compliance

**Instruments and equipment used for monitoring shall be:** Periodically maintained and calibrated on an established frequency;

( ) Statutory
(X) Mandatory
( ) Guidance

**COMPLIANCE STATEMENT:**
Instruments and equipment used for monitoring SHALL be: Periodically maintained and calibrated on an established frequency;

**ACTIONS/DOCUMENTS:**
SLAC RadCon Manual Article 555.5 and 563.1

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 401(b)(1) End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
            MAIN FACILITY (1)

10CFR835: 401(b)(2)  STATUS: Full Compliance

**Instruments and equipment used for monitoring shall be:** Appropriate for the type(s), levels, and energies of the radiation(s) encountered;

- ( ) Statutory
- (X) Mandatory
- ( ) Guidance

**COMPLIANCE STATEMENT:**
Instruments and equipment used for monitoring SHALL be: Appropriate for the type(s), levels, and energies of the radiation(s) encountered;

**ACTIONS/DOCUMENTS:**
SLAC *RadCon Manual* Article 551.13

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Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 401(b)(2) End.
10/15/1999        STANFORD LINEAR ACCELERATOR CENTER
                 MAIN FACILITY

10CFR835:  401(b)(3)          STATUS: Full Compliance

**Instruments and equipment used for monitoring shall be:** Appropriate for existing environmental conditions; and

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**COMPLIANCE STATEMENT:**
Instruments and equipment used for monitoring **SHALL** be: Appropriate for existing environmental conditions; and

**ACTIONS/DOCUMENTS:**
SLAC RadCon Manual Article 551.13

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Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 401(b)(3) End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER  
MAIN FACILITY  

10CFR835:  401(b)(4)  STATUS: Full Compliance  

**Instruments and equipment used for monitoring shall be:** Routinely tested for operability.  

( ) Statutory  
(X) Mandatory  
( ) Guidance  

**COMPLIANCE STATEMENT:**  
Instruments and equipment used for monitoring SHALL be: Routinely tested for operability.  

**ACTIONS/DOCUMENTS:**  
SLAC *RadCon Manual* Article 551.5.  

Headquarters Technical Reviewer:  
Operations Office Technical Reviewer:  

Headquarters Program Reviewer:  
Operations Office Technical Reviewer:  

Surveillance Number:  
Review Number:  

10CFR835:  401(b)(4) End.
For the purpose of monitoring individual exposures to external radiation, personnel dosimetry shall be provided to and used by: Radiological workers who, under typical conditions, are likely to receive one or more of the following: An effective dose equivalent to the whole body of 0.1 rem (0.001 sievert) or more in a year;

COMPLIANCE STATEMENT:
For the purpose of monitoring individual exposures to external radiation, personnel dosimetry SHALL be provided to and used by: Radiological workers who, under typical conditions, are likely to receive one or more of the following: An effective dose equivalent to the whole body of 0.1 rem (0.001 sievert) or more in a year;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 511.1.A.
10CFR835: 402(a)(1)(ii) STATUS: Full Compliance

For the purpose of monitoring individual exposures to external radiation, personnel dosimetry shall be provided to and used by: Radiological workers who, under typical conditions, are likely to receive one or more of the following: A shallow dose equivalent to the skin or to any extremity of 5 rems (0.05 sievert) or more in a year;

(X) Mandatory

COMPLIANCE STATEMENT:
For the purpose of monitoring individual exposures to external radiation, personnel dosimetry SHALL be provided to and used by: Radiological workers who, under typical conditions, are likely to receive one or more of the following: A shallow dose equivalent to the skin or to any extremity of 5 rems (0.05 sievert) or more in a year;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 511.1.A.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

For the purpose of monitoring individual exposures to external radiation, personnel dosimetry shall be provided to and used by: Radiological workers who, under typical conditions, are likely to receive one or more of the following: A lens of the eye dose equivalent of 1.5 rems (0.015 sievert) or more in a year;

COMPLIANCE STATEMENT:
For the purpose of monitoring individual exposures to external radiation, personnel dosimetry SHALL be provided to and used by: Radiological workers who, under typical conditions, are likely to receive one or more of the following: A lens of the eye dose equivalent of 1.5 rems (0.015 sievert) or more in a year;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual 511.1.A.
For the purpose of monitoring individual exposures to external radiation, personnel dosimetry shall be provided to and used by: Declared pregnant workers who are likely to receive from external sources a dose equivalent to the embryo/fetus in excess of 10 percent of the applicable limit at § 835.206(a).

COMPLIANCE STATEMENT:
For the purpose of monitoring individual exposures to external radiation, personnel dosimetry SHALL be provided to and used by: Declared pregnant workers who are likely to receive from external sources a dose equivalent to the embryo/fetus in excess of 10 percent of the applicable limit at §835.206(a).

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 511.1.B.
For the purpose of monitoring individual exposures to external radiation, personnel dosimetry shall be provided to and used by: Occupationally exposed minors likely to receive a dose in excess of 50 percent of the applicable limits in § 835.207 in a year from external sources;

(X) Mandatory

COMPLIANCE STATEMENT:
For the purpose of monitoring individual exposures to external radiation, personnel dosimetry SHALL be provided to and used by: Occupationally exposed minors likely to receive a dose in excess of 50 percent of the applicable limits in § 835.207 in a year from external sources;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 511.1.C.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
             MAIN FACILITY

10CFR835:  402(a)(4)    STATUS: Full Compliance

For the purpose of monitoring individual exposures to external radiation, personnel
dosimetry shall be provided to and used by: Members of the public entering a
controlled area likely to receive a dose in excess of 50 percent of the applicable limits
in § 835.208 in a year from external sources; and

() Statutory
(X) Mandatory
() Guidance

COMPLIANCE STATEMENT:
For the purpose of monitoring individual exposures to external radiation, personnel
dosimetry SHALL be provided to and used by: Members of the public entering a
controlled area likely to receive a dose in excess of 50 percent of the applicable limits in
§835.208 in a year from external sources; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 511.1.D.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

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**For the purpose of monitoring individual exposures to external radiation, personnel dosimetry shall be provided to and used by: Individuals entering a high or very high radiation area.**

( ) Statutory  
(X) Mandatory  
( ) Guidance  

**COMPLIANCE STATEMENT:**
For the purpose of monitoring individual exposures to external radiation, personnel dosimetry SHALL be provided to and used by: Individuals entering a high or very high radiation area.

**ACTIONS/DOCUMENTS:**
SLAC *RadCon Manual* Article 334.3.C. and 511.1.E.

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10/15/1999    STANFORD LINEAR ACCELERATOR CENTER  
    MAIN FACILITY  

10CFR835: 402(b)    STATUS: Full Compliance  

External dose monitoring programs implemented to demonstrate compliance with § 835.402(a) shall be adequate to demonstrate compliance with the dose limits established in subpart C of this part and

( ) Statutory  
(X) Mandatory  
( ) Guidance  

COMPLIANCE STATEMENT:  
External dose monitoring programs implemented to demonstrate compliance with § 835.402(a) SHALL be adequate to demonstrate compliance with the dose limits established in subpart C of this part and

ACTIONS/DOCUMENTS:  
SLAC is DOELAP-Accredited, 1997.

Headquarters Technical Reviewer:    Operations Office Technical Reviewer:  
Headquarters Program Reviewer:    Operations Office Technical Reviewer:  
Surveillance Number:    Review Number:  

10CFR835: 402(b) End.
10CFR835: 402(b)(1) STATUS: Full Compliance

External dose monitoring programs implemented to demonstrate compliance with § 835.402(a) shall be adequate to demonstrate compliance with the dose limits established in subpart C of this part and shall be: Accredited, or excepted from accreditation, in accordance with the DOE Laboratory Accreditation Program for Personnel Dosimetry; or

() Statutory
(X) Mandatory
() Guidance

COMPLIANCE STATEMENT:
External dose monitoring programs implemented to demonstrate compliance with § 835.402(a) shall be adequate to demonstrate compliance with the dose limits established in subpart C of this part and SHALL be: Accredited, or excepted from accreditation, in accordance with the DOE Laboratory Accreditation Program for Personnel Dosimetry; or

ACTIONS/DOCUMENTS:
SLAC’s external dosimetry program is DOELAP Accredited, 1997.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

External dose monitoring programs implemented to demonstrate compliance with § 835.402(a) shall be adequate to demonstrate compliance with the dose limits established in subpart C of this part and shall be: Determined by the Secretarial Officer responsible for environment, safety and health matters to have performance substantially equivalent to that of programs accredited under the DOE Laboratory Accreditation Program for Personnel Dosimetry.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Not Applicable because SLAC is a DOELAP accredited facility for external dosimetry.

ACTIONS/DOCUMENTS:
None

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 402(b)(2) End.
For the purpose of monitoring individual exposures to internal radiation, internal dosimetry programs (including routine bioassay programs) shall be conducted for:
Radiological workers who, under typical conditions, are likely to receive a committed effective dose equivalent of 0.1 rem (0.001 sievert) or more from all occupational radionuclide intakes in a year;

() Statutory
(X) Mandatory
() Guidance

COMPLIANCE STATEMENT:
For the purpose of monitoring individual exposures to internal radiation, internal dosimetry programs (including routine bioassay programs) SHALL be conducted for:
Radiological workers who, under typical conditions, are likely to receive a committed effective dose equivalent of 0.1 rem (0.001 sievert) or more from all occupational radionuclide intakes in a year;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 521.1A.

Headquarters Technical Reviewer: Operation Office Technical Reviewer:
Headquarters Program Reviewer: Operation Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 402(c)(1) End.
For the purpose of monitoring individual exposures to internal radiation, internal dosimetry programs (including routine bioassay programs) shall be conducted for:
Declared pregnant workers likely to receive an intake or intakes resulting in a dose equivalent to the embryo/fetus in excess of 10 percent of the limit stated in § 835.206(a); or

Compliance Statement:
For the purpose of monitoring individual exposures to internal radiation, internal dosimetry programs (including routine bioassay programs) SHALL be conducted for:
Declared pregnant workers likely to receive an intake or intakes resulting in a dose equivalent to the embryo/fetus in excess of 10 percent of the limit stated in § 835.206(a);

Actions/Documents:
SLAC RadCon Manual Article 521.1.B.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 402(c)(2) End.
For the purpose of monitoring individual exposures to internal radiation, internal dosimetry programs (including routine bioassay programs) shall be conducted for: Occupationally exposed minors who are likely to receive a dose in excess of 50 percent of the applicable limit stated at §835.207 from all radionuclide intakes in a year; or

(X) Mandatory

COMPLIANCE STATEMENT:
For the purpose of monitoring individual exposures to internal radiation, internal dosimetry programs (including routine bioassay programs) SHALL be conducted for: Occupationally exposed minors who are likely to receive a dose in excess of 50 percent of the applicable limit stated at §835.207 from all radionuclide intakes in a year; or

SLAC RadCon Manual Article 521.1.C.
10CFR835: 402(c)(4)  STATUS: Full Compliance

For the purpose of monitoring individual exposures to internal radiation, internal dosimetry programs (including routine bioassay programs) shall be conducted for:
Members of the public entering a controlled area likely to receive a dose in excess of 50 percent of the limit stated at § 835.208 from all radionuclide intakes in a year.

(X) Mandatory

COMPLIANCE STATEMENT:
For the purpose of monitoring individual exposures to internal radiation, internal dosimetry programs (including routine bioassay programs) SHALL be conducted for:
Members of the public entering a controlled area likely to receive a dose in excess of 50 percent of the limit stated at §835.208 from all radionuclide intakes in a year.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 521.1D.

10CFR835: 402(c)(4) End.
Internal dose evaluation programs implemented to demonstrate compliance with § 835.402(c) shall be adequate to demonstrate compliance with the dose limits established in subpart C of this part and

COMPLIANCE STATEMENT:
Internal dose evaluation programs implemented to demonstrate compliance with §835.402(c) SHALL be adequate to demonstrate compliance with the dose limits established in subpart C of this part and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 521.1.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 402(d) End.
Internal dose evaluation programs implemented to demonstrate compliance with § 835.402(c) shall be adequate to demonstrate compliance with the dose limits established in subpart C of this part and shall be: Accredited, or excepted from accreditation, in accordance with the DOE Laboratory Accreditation Program for Radiobioassay; or

COMPLIANCE STATEMENT:
Internal dose evaluation programs implemented to demonstrate compliance with §835.402(c) shall be adequate to demonstrate compliance with the dose limits established in subpart C of this part and SHALL be: Accredited, or excepted from accreditation, in accordance with the DOE Laboratory Accreditation Program for Radiobioassay; or

ACTIONS/DOCUMENTS:
Due to the operational nature and radiation safety history of SLAC, no significant intake of radioactivity has been known or anticipated to have occurred, and none are anticipated to occur in the future. Accordingly, the potential for any intake of radioactivity at SLAC, particularly any leading to a Committed Effective Dose Equivalent (CEDE) of 100 mrem or greater in any year, is considered negligible. SLAC elects not to seek DOELAP-accreditation of its internal dosimetry program unless and until radiological conditions warrant otherwise. SLAC will submit a technical justification for not seeking this accreditation to DOE by 06/3/2000. SLAC will DOELAP-accredit its internal dosimetry program if and when actual or anticipated changes in operational conditions warrant. Until such time, SLAC will maintain compliance with 10CFR835.402(d)(1) via SLAC RadCon Manual Articles 521, 522, and 523.
Internal dose evaluation programs implemented to demonstrate compliance with § 835.402(c) shall be adequate to demonstrate compliance with the dose limits established in subpart C of this part and shall be: Determined by the Secretarial Officer responsible for environment, safety and health matters to have performance substantially equivalent to that of programs accredited under the DOE Laboratory Accreditation Program for Radiobioassay.

ACTIONS/DOCUMENTS:
SLAC SHALL either become accredited in accordance with the implementation schedule at §835.101(f) or after January 1, 2002, submit radiobioassay samples intended for independent analysis to an accredited radiobioassay laboratory.
Monitoring of airborne radioactivity shall be performed: Where an individual is likely to receive an exposure of 40 or more DAC-hours in a year; or.

COMPLIANCE STATEMENT:
Monitoring of airborne radioactivity SHALL be performed: Where an individual is likely to receive an exposure of 40 or more DAC-hours in a year; or.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 555.2, and SLAC Radiological Work Controls Manual Chapter 11 (SLAC-I-760-2A05O-009)
Monitoring of airborne radioactivity shall be performed: As necessary to characterize the airborne radioactivity hazard where respiratory protective devices for protection against airborne radionuclides have been prescribed.

COMPLIANCE STATEMENT:
Monitoring of airborne radioactivity SHALL be performed: As necessary to characterize the airborne radioactivity hazard where respiratory protective devices for protection against airborne radionuclides have been prescribed.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 555.1.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 403(b)  STATUS: Full Compliance

**Real-time air-monitoring shall be performed as necessary to detect and provide**
warning of airborne radioactivity concentrations that warrant immediate action to
terminate inhalation of airborne radioactive material

| ( ) Statutory | (X) Mandatory | ( ) Guidance |

**COMPLIANCE STATEMENT:**
Real-time air-monitoring SHALL be performed as necessary to detect and provide
warning of airborne radioactivity concentrations that warrant immediate action to
terminate inhalation of airborne radioactive material

**ACTIONS/DOCUMENTS:**
SLAC *RadCon Manual* 555.3

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Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 403(b) End.
If packages containing quantities of radioactive material in excess of a Type A quantity (as defined at 10 CFR 71.4) are expected to be received from radioactive material transportation, arrangements shall be made to either: Take possession of the package when the carrier offers it for delivery; or

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
If packages containing quantities of radioactive material in excess of a Type A quantity (as defined at 10 CFR 71.4) are expected to be received from radioactive material transportation, arrangements SHALL be made to either: Take possession of the package when the carrier offers it for delivery; or

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 424.1.A.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 405(a)(1) End.
If packages containing quantities of radioactive material in excess of a Type A quantity (as defined at 10 CFR 71.4) are expected to be received from radioactive material transportation, arrangements shall be made to either: Receive notification as soon as practicable after arrival of the package at the carrier’s and to take possession of the package expeditiously after receiving such notification.

COMPLIANCE STATEMENT:
If packages containing quantities of radioactive material in excess of a Type A quantity (as defined at 10 CFR 71.4) are expected to be received from radioactive material transportation, arrangements SHALL be made to either: Receive notification as soon as practicable after arrival of the package at the carrier’s and to take possession of the package expeditiously after receiving such notification.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 424.1.B
Upon receipt from radioactive material transportation, external surfaces of packages known to contain radioactive material shall be monitored if the package: Is labeled with a Radioactive White I, Yellow II, or Yellow III label (as specified at 49 CFR 172.403 and 172.436-440); or

COMPLIANCE STATEMENT:
Upon receipt from radioactive material transportation, external surfaces of packages known to contain radioactive material SHALL be monitored if the package: Is labeled with a Radioactive White I, Yellow II, or Yellow III label (as specified at 49 CFR 172.403 and 172.436-440); or

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 424.3.A.
Upon receipt from radioactive material transportation, external surfaces of packages known to contain radioactive material shall be monitored if the package: Has been transported as low specific activity material (as defined at 10 CFR 71.4) on an exclusive use vehicle (as defined at 10 CFR 71.4); or

COMPLIANCE STATEMENT:
Upon receipt from radioactive material transportation, external surfaces of packages known to contain radioactive material SHALL be monitored if the package: Has been transported as low specific activity material (as defined at 10 CFR 71.4) on an exclusive use vehicle (as defined at 10 CFR 71.4); or

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 424.3.B.
Upon receipt from radioactive material transportation, external surfaces of packages known to contain radioactive material shall be monitored if the package: Has evidence of degradation, such as packages that are crushed, wet, or damaged.

COMPLIANCE STATEMENT:
Upon receipt from radioactive material transportation, external surfaces of packages known to contain radioactive material SHALL be monitored if the package: Has evidence of degradation, such as packages that are crushed, wet, or damaged.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 424.3.C.
The monitoring required by paragraph (b) of this section shall include: Measurements of removable contamination levels, unless the package contains only special form (as defined at 10 CFR 71.4) or gaseous radioactive material; and

COMPLIANCE STATEMENT:
The monitoring required by paragraph (b) of this section SHALL include: Measurements of removable contamination levels, unless the package contains only special form (as defined at 10 CFR 71.4) or gaseous radioactive material; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 424.4.A.
The monitoring required by paragraph (b) of this section shall include:
Measurements of the radiation levels, unless the package contains less than a Type A quantity (as defined at 10 CFR 71.4) of radioactive material.

COMPLIANCE STATEMENT:
The monitoring required by paragraph (b) of this section SHALL include: Measurements of the radiation levels, unless the package contains less than a Type A quantity (as defined at 10 CFR 71.4) of radioactive material.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 424.4.B.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 405(c)(2) End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
           MAIN FACILITY

10CFR835:  405(d)  STATUS: Full Compliance

The monitoring required in paragraph (b) of this section shall be completed as soon as practicable following receipt of the package, but not latter than 8 hours after the beginning of the working day following receipt of the package.

(X) Mandatory
( ) Statutory
( ) Guidance

COMPLIANCE STATEMENT:
The monitoring required in paragraph (b) of this section SHALL be completed as soon as practicable following receipt of the package, but not latter than 8 hours after the beginning of the working day following receipt of the package.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 424.5.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 405(d) End.
10/15/1999 STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 501(a) STATUS: Full Compliance

Personnel entry control shall be maintained for each radiological area.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Personnel entry control SHALL be maintained for each radiological area.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 334.0 and Chapter 3, Part 3 introduction:

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 501(a) End.
The degree of control shall be commensurate with existing and potential radiological hazards within the area.

COMPLIANCE STATEMENT:
The degree of (personnel entry) control SHALL be commensurate with existing and potential radiological hazards within the area.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 3, Part 3 introduction.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 501(b) End.
10CFR835: 501(c)  STATUS: Full Compliance

One or more of the following methods shall be used to ensure (personnel entry) control: (1) Signs and barricades; (2) Control devices on entrances; (3) Conspicuous visual and/or audible alarms; (4) Locked entrance ways; or (5) Administrative controls.

(X) Mandatory

COMPLIANCE STATEMENT:
One or more of the following methods SHALL be used to ensure (personnel entry) control: (1) Signs and barricades; (2) Control devices on entrances; (3) Conspicuous visual and/or audible alarms; (4) Locked entrance ways; or (5) Administrative controls.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 3, Part 3 introduction.

10CFR835: 501(c) End.
Written authorization shall be required to control entry into and perform work within radiological areas.

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Written authorization SHALL be required to control entry into and perform work within radiological areas.

ACtIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 3, Part 3 introduction, and Article 322.0.

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Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

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10CFR835: 501(d).01 End.
These authorizations shall specify radiation protection measures commensurate with the existing and potential hazards.

COMPLIANCE STATEMENT:
These authorizations SHALL specify radiation protection measures commensurate with the existing and potential hazards.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 3, Article 322.0 and Part 3 introduction.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 501(d).02 End.
10/15/1999       STANFORD LINEAR ACCELERATOR CENTER  
MAIN FACILITY

| 10CFR835: 501(e) | STATUS: Full Compliance |

**No control(s) shall be installed at any radiological area exit that would prevent rapid evacuation of personnel under emergency conditions.**

( ) Statutory  
(X) Mandatory  
( ) Guidance

**COMPLIANCE STATEMENT:**  
No control(s) SHALL be installed at any radiological area exit that would prevent rapid evacuation of personnel under emergency conditions.

**ACTIONS/DOCUMENTS:**  
SLAC *RadCon Manual* Chapter 3, Part 3 introduction.

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Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

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10CFR835: 501(e) End.
The following measures shall be implemented for each entry into a high radiation area: The area shall be monitored as necessary during access to determine exposure rates to which the individuals are exposed; and

(A) Statutory
(X) Mandatory
() Guidance

COMPLIANCE STATEMENT:
The following measures SHALL be implemented for each entry into a high radiation area: The area SHALL be monitored as necessary during access to determine exposure rates to which the individuals are exposed; and.

ACTIONS/DOCUMENTS:
SLAC *RadCon Manual* Article 334.3.D

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 502(a)(1) End
The following measures shall be implemented for each entry into a high radiation area: Each individual shall be monitored by a supplemental dosimetry device or other means capable of providing an immediate estimate of the individual’s integrated deep dose equivalent during the entry.

COMPLIANCE STATEMENT:
The following measures SHALL be implemented for each entry into a high radiation area: Each individual SHALL be monitored by a supplemental dosimetry device or other means capable of providing an immediate estimate of the individual’s integrated deep dose equivalent during the entry.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 334.3.C and 513.2.
Physical controls. One or more of the following features shall be used for each entrance or access point to a high radiation area where radiation levels exist such that an individual could exceed a deep dose equivalent to the whole body of 1 rem (0.01 sievert) in any one hour at 30 centimeters from the source or from any surface that the radiation penetrates: (1) A control device that prevents entry to the area when high radiation levels exist or upon entry causes the radiation level to be reduced below that level defining a high radiation area; (2) A device that functions automatically to prevent use or operation of the radiation source or field while individuals are in the area; (3) A control device that energizes a conspicuous visible or audible alarm signal so that the individual entering the high radiation area and the supervisor of the activity are made aware of the entry; (4) Entryways that are locked. During periods when access to the area is required, positive control over each entry is maintained; (5) Continuous direct or electronic surveillance that is capable of preventing unauthorized entry; (6) A control device that will automatically generate audible and visual alarm signals to alert personnel in the area before use or operation of the radiation source and in sufficient time to permit evacuation of the area or activation of a secondary control device that will prevent use or operation of the source.

COMPLIANCE STATEMENT:
High Radiation Area, physical controls. One or more of the following features SHALL be used for each entrance or access point to a high radiation area where radiation levels exist such that an individual could exceed a deep dose equivalent to the whole body of 1 rem (0.01 sievert) in any one hour at 30 centimeters from the source or from any surface that the radiation penetrates: (1) A control device that prevents entry to the area when high radiation levels exist or upon entry causes the radiation level to be reduced below that level defining a high radiation area; (2) A device that functions automatically to prevent use or operation of the radiation source or field while individuals are in the area; (3) A control device that energizes a conspicuous visible or audible alarm signal so that the individual entering the high radiation area and the supervisor of the activity are made aware of the entry; (4) Entryways that are locked. During periods when access to the area is required, positive control over each entry is maintained; (5) Continuous direct or electronic surveillance that is capable of preventing unauthorized entry; (6) A control device that will automatically generate audible and visual alarm signals to alert personnel in the area before use or operation of the radiation source and in sufficient time to permit evacuation of the area or activation of a secondary control device that will prevent use or operation of the source.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
              MAIN FACILITY

10CFR835: 502(b)    STATUS: Full Compliance

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Appendix 3B.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 502(b) End.
Very high radiation areas. In addition to the above requirements, additional measures shall be implemented to ensure individuals are not able to gain unauthorized or inadvertent access to very high radiation areas.

COMPLIANCE STATEMENT:
Very high radiation areas. In addition to the above requirements, additional measures SHALL be implemented to ensure individuals are not able to gain unauthorized or inadvertent access to very high radiation areas.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 334.5 and Appendix 3B.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 502(c) End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
             MAIN FACILITY

10CFR835:  502(d)  STATUS: Full Compliance

No control(s) shall be established in a high or very high radiation area that would
prevent rapid evacuation of personnel.

( ) Statutory  (X) Mandatory  ( ) Guidance

COMPLIANCE STATEMENT:
No control(s) SHALL be established in a high or very high radiation area that would
prevent rapid evacuation of personnel.

ACTIONS/DOCUMENTS:

Headquarters Technical Reviewer:   Operations Office Technical Reviewer:

Headquarters Program Reviewer:     Operations Office Technical Reviewer:

Surveillance Number:               Review Number:

10CFR835:  502(d) End.
10/15/1999             STANFORD LINEAR ACCELERATOR CENTER  
                       MAIN FACILITY

10CFR835: 601(a)       STATUS: Full Compliance

Except as otherwise provided in this subpart, posting and labels required by this 
subpart shall include the standard radiation warning trefoil in black or magenta 
imposed upon a yellow background.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:  
Except as otherwise provided in Subpart G, required signs and labels SHALL have a 
yellow background. The radiation warning trefoil SHALL be black or magenta.

ACTIONS/DOCUMENTS:  
SLAC RadCon Manual Article 231.2.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 601(a) End.
10CFR835: 601(b).01 STATUS: Full Compliance

**COMPLIANCE STATEMENT:** Signs required by this subpart SHALL be clear and conspicuously posted and may include radiological protection instructions.

**ACTIONS/DOCUMENTS:**
SLAC RadCon Manual Article 231.1

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 601(b).01 End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
            MAIN FACILITY

10CFR835:  601(b).02  STATUS: Full Compliance

Signs required by this subpart shall be clear and conspicuously posted and may include radiological protection instructions.

( ) Statutory
( ) Mandatory
(X) Guidance

COMPLIANCE STATEMENT:
Signs required by this subpart shall be clear and conspicuously posted and MAY include radiological protection instructions.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 231.1

Headquarters Technical Reviewer:  Operations Office Technical Reviewer:

Headquarters Program Reviewer:  Operations Office Technical Reviewer:

Surveillance Number:  Review Number:

10CFR835:  601(b).02 End.
10/15/1999      STANFORD LINEAR ACCELERATOR CENTER
               MAIN FACILITY

10CFR835:  601(c).01    STATUS: Not Applicable

The posting and labeling requirements in this subpart may be modified to reflect the
special considerations of DOE activities conducted at private residences or business.

( ) Statutory
( ) Mandatory
(X) Guidance

COMPLIANCE STATEMENT:
SLAC has never conducted, nor is there any plan to ever conduct, DOE activities at
private residences or business.

ACTIONS/DOCUMENTS:
None.

Headquarters Technical Reviewer:     Operations Office Technical Reviewer:

Headquarters Program Reviewer:       Operations Office Technical Reviewer:

Surveillance Number:                 Review Number:

10CFR835:  601(c).01 End.
10CFR835: 601(c).02  STATUS: Not Applicable

Such modifications (to posting requirements) shall provide the same level of protection to individuals as the existing provisions in this section.

() Statutory
(X) Mandatory
() Guidance

COMPLIANCE STATEMENT:
SLAC has never conducted, nor is there any plan to ever conduct, DOE activities at private residences.

ACTIONS/DOCUMENTS:
None.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 601(c).02 End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER  
MAIN FACILITY

10CFR835:  602(a) 01  STATUS: Full Compliance

Each access point to a controlled area (as defined in § 835.2) shall be posted, whenever radiological areas or radioactive material areas exist in the area.

() Statutory  
(X) Mandatory  
() Guidance

COMPLIANCE STATEMENT:
Each access point to a controlled area (as defined in §835.2) SHALL be posted, whenever radiological areas or radioactive material areas exist in the area.

ACTIONS/DOCUMENTS:  
SLAC RadCon Manual Article 232.2

Headquarters Technical Reviewer:  
Operations Office Technical Reviewer:

Headquarters Program Reviewer:  
Operations Office Technical Reviewer:

Surveillance Number:  
Review Number:

10CFR835:  602(a) 01 End.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
               MAIN FACILITY

10CFR835: 602(a) 02                STATUS: Full Compliance

Individuals who enter only controlled areas without entering radiological areas or radioactively
material areas are not expected to receive a total effective dose equivalent of more than 0.1 rem (0.0001
dievert) in a year.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Individuals who enter only controlled areas without entering radiological areas or radioactively material areas ARE NOT expected to receive a total effective dose equivalent of more than 0.1 rem (0.0001 dievert) in a year.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 232.1 and 331.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 602(a) 02 End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER  
MAIN FACILITY

10CFR835:  602(b)  STATUS: Full Compliance

**Signs used for this purpose may be selected by the contractor to avoid conflict with local security requirements.**

(X) Statutory
( ) Mandatory
( ) Guidance

**COMPLIANCE STATEMENT:**
Signs used for this purpose MAY be selected by the contractor to avoid conflict with local security requirements.

**ACTIONS/DOCUMENTS:**
SLAC *RadCon Manual* Articles 232.2 and 232.3.

**Headquarters Technical Reviewer:**  Operations Office Technical Reviewer:

**Headquarters Program Reviewer:**  Operations Office Technical Reviewer:

**Surveillance Number:**  Review Number:

10CFR835:  602(b) End.
10/15/1999      STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835:  603                      STATUS: Full Compliance

Each access point to radiological areas and radioactive material areas (as defined in
§ 835.2) shall be posted with conspicuous signs bearing the wording provided in this
section.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Each access point to radiological areas and radioactive material areas (as defined in
§835.2) SHALL be posted with conspicuous signs bearing the wording provided in this
section.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 234.1 and 235.1 and 236.1 and .2.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835:  603 End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
             MAIN FACILITY

10CFR835: 603(a)  STATUS: Full Compliance

**Radiation Area. The words "Caution, Radiation Area" shall be posted at each radiation area.**

( ) Statutory  
(X) Mandatory  
( ) Guidance

**COMPLIANCE STATEMENT:**  
Radiation Area. The words "Caution, Radiation Area" SHALL be posted at each radiation area

**ACTIONS/DOCUMENTS:**  
SLAC *RadCon Manual* Article 234.1 and Table 2.3.

Headquarters Technical Reviewer:  
Operations Office Technical Reviewer:

Headquarters Program Reviewer:  
Operations Office Technical Reviewer:

Surveillance Number:  
Review Number:

10CFR835: 603(a) End.
10/15/1999   STANFORD LINEAR ACCELERATOR CENTER
             MAIN FACILITY

10CFR835:  603(b)     STATUS: Full Compliance

High Radiation Area. The words “Caution, High Radiation Area” or "Danger, High
Radiation Area" shall be posted at each high radiation area.

() Statutory
(X) Mandatory
() Guidance

COMPLIANCE STATEMENT:
High Radiation Area. The words “Caution, High Radiation Area” or "Danger, High
Radiation Area" SHALL be posted at each high radiation area.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 234.1 and Table 2.3.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 603(b) End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
           MAIN FACILITY

10CFR835:  603(c)  STATUS: Full Compliance

Very High Radiation Area. The words "Grave Danger, Very High Radiation Area"
shall be posted at each very high radiation area.

() Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Very High Radiation Area. The words "Grave Danger, Very High Radiation Area"
SHALL be posted at each very high radiation area.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 234.1 and Table 2.3.

Headquarters Technical Reviewer:  Operations Office Technical Reviewer:
Headquarters Program Reviewer:  Operations Office Technical Reviewer:
Surveillance Number:  Review Number:

10CFR835:  603(c) End.
10/15/1999 STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 603(d) STATUS: Full Compliance

Airborne Radioactivity Area. The words "Caution, Airborne Radioactivity Area" or "Danger, Airborne Radioactivity Area" shall be posted at each airborne radioactivity area.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Airborne Radioactivity Area. The words "Caution, Airborne Radioactivity Area" or "Danger, Airborne Radioactivity Area" SHALL be posted at each airborne radioactivity area.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 235.1 and Table 2.4.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 603(d) End.
Contamination Area. The words "Caution, Contamination Area" shall be posted at each contamination area.

COMPLIANCE STATEMENT:
Contamination Area. The words "Caution, Contamination Area" SHALL be posted at each contamination area.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 235.1 and Table 2.4.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 603(e) End.
High Contamination Area. The words “Caution High Contamination Area” or "Danger, High Contamination Area" shall be posted at each high contamination area.

COMPLIANCE STATEMENT:
High Contamination Area. The words “Caution High Contamination Area” or "Danger, High Contamination Area" SHALL be posted at each high contamination area.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 235.1 and Table 2.4.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER  
MAIN FACILITY

10CFR835: 603(g)  STATUS: Full Compliance

Radioactive Material Area. The words "Caution, Radioactive Material(s)" SHALL be posted at each radioactive material area.

( ) Statutory  
(X) Mandatory  
( ) Guidance

COMPLIANCE STATEMENT:  
Radioactive Material Area. The words "Caution, Radioactive Material(s)" SHALL be posted at each radioactive material area.

ACTIONS/DOCUMENTS:  
SLAC RadCon Manual Article 236.1 and 333.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 603(g) End.
10CFR835: 604(a)  STATUS: Full Compliance

Areas may be excepted from the posting requirements of § 835.603 for periods of less than 8 continuous hours when placed under continuous observation and control of an individual knowledge of, and empowered to implement, required access and exposure control measures.

(X) Mandatory

COMPLIANCE STATEMENT:
Areas may be excepted from the posting requirements of § 835.603 for periods of less than 8 continuous hours WHEN PLACED under continuous observation and control of an individual knowledge of, and empowered to implement, required access and exposure control measures.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 234.1 and 235.2

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 604(a) End.
Areas may be excepted from the radioactive material area posting requirements of § 835.603(g) when: Posted in accordance with § 835.603(a) through (f); or

COMPLIANCE STATEMENT:
Areas may be excepted from the radioactive material area posting requirements of § 835.603(g) when: POSTED in accordance with § 835.603(a) through (f); or

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 236.3.A
10/15/1999   STANFORD LINEAR ACCELERATOR CENTER
            MAIN FACILITY

10CFR835: 604(b)(2) STATUS: Full Compliance

Areas may be excepted from the radioactive material area posting requirements of § 835.603(g) when: Each item or container of radioactive material is labeled in accordance with this subpart such that individuals entering the area are made aware of the hazard; or

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Areas may be excepted from the radioactive material area posting requirements of § 835.603(g) when: Each item or container of radioactive material IS LABELED in accordance with this subpart such that individuals entering the area are made aware of the hazard; or

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 236.3.B

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 604(b)(2) End.
Areas may be excepted from the radioactive material area posting requirements of § 835.603(g) when: The radioactive material of concern consists solely of structures or installed components which have been activated (i.e. such as being exposed to neutron radiation or particles produced in an accelerator.

COMPLIANCE STATEMENT:
Areas may be excepted from the radioactive material area posting requirements of § 835.603(g) when: The radioactive material of concern consists solely of structures or installed components which have been activated (i.e. such as being exposed to neutron radiation or particles produced in an accelerator)

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 236.3.C

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 604(b)(3) End.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
             MAIN FACILITY

10CFR835: 604(c)        STATUS: Full Compliance

Areas containing only packages received from radioactive material transportation labeled and in non-degraded condition need not be posted in accordance with § 835.603 until the packages are monitored in accordance with § 835.405.

( ) Statutory
( ) Mandatory
(X) Guidance

COMPLIANCE STATEMENT:
Areas containing only packages received from radioactive material transportation labeled and in non-degraded condition need not be posted in accordance with § 835.603 until the packages are monitored in accordance with § 835.405.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 236.3.D

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 604(c) End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
          MAIN FACILITY

10CFR835:  605  01  STATUS: Full Compliance

Except as provided in § 835.606, each item or container of radioactive material shall
bear a durable, clearly visible label bearing the standard radiation warning trefoil
and the words “Caution, Radioactive Material” or “Danger, Radioactive Material.”

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Except as provided in § 835.606, each item or container of radioactive material SHALL
bear a durable, clearly visible label bearing the standard radiation warning trefoil and the
words “Caution, Radioactive Material” or “Danger, Radioactive Material.”.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 412.1, .3.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835:  605  01 End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835:  605  02  STATUS: Full Compliance

The label shall also provide sufficient information to permit individuals handling, using, or working in the vicinity of the items or containers, to take precautions or control exposures

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The label SHALL also provide sufficient information to permit individuals handling, using, or working in the vicinity of the items or containers, to take precautions or control exposures

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 412.1.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835:  605  02 End.
Items and containers may be excepted from the radioactive material labeling requirements of § 835.605 when: Used, handled, or stored in areas posted and controlled in accordance with this subpart and sufficient information is provided to permit individuals to take precautions to avoid or control exposures; or

( ) Statutory  
(X) Mandatory  
( ) Guidance

COMPLIANCE STATEMENT:
Items and containers may be excepted from the radioactive material labeling requirements of § 835.605 when: Used, handled, or stored in areas posted and controlled in accordance with this subpart and sufficient INFORMATION IS PROVIDED to permit individuals to take precautions to avoid or control exposures; or

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 411.2 and Article 412.2.J.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:  
Headquarters Program Reviewer: Operations Office Technical Reviewer:  
Surveillance Number: Review Number:

10CFR835: 606(a)(1) End.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
              MAIN FACILITY

10CFR835: 606(a)(2)    STATUS: Full Compliance

**Items and containers may be excepted from the radioactive material labeling requirements of § 835.605 when:** The quantity of radioactive material is less than one tenth of the values specified in appendix E of this part; or

( ) Statutory
(X) Mandatory
( ) Guidance

**COMPLIANCE STATEMENT:**
Items and containers may be excepted from the radioactive material labeling requirements of § 835.605 when: The quantity of radioactive material IS LESS than one tenth of the values specified in appendix E of this part; or

**ACTIONS/DOCUMENTS:**
SLAC *RadCon Manual* Article 412.2.K

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 606(a)(2) End.
Items and containers may be excepted from the radioactive material labeling requirements of § 835.605 when: Packaged, labeled and marked in accordance with the regulations of the Department of Transportation or DOE Orders governing radioactive material transportation; or

COMPLIANCE STATEMENT:
Items and containers may be excepted from the radioactive material labeling requirements of § 835.605 when: Packaged, labeled and marked IN ACCORDANCE with the REGULATIONS of the Department of Transportation or DOE Orders governing radioactive material transportation; or

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 412.2.B.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 606(a)(4)  STATUS: Full Compliance

Items and containers may be excepted from the radioactive material labeling requirements of § 835.605 when: Inaccessible, or accessible only to individuals authorized to handle or use them, or to work in the vicinity; or

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Items and containers may be excepted from the radioactive material labeling requirements of § 835.605 when: Inaccessible, or accessible ONLY TO individuals authorized to handle or use them, or to work in the vicinity; or

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 412.2.D.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10/15/1999 STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 606(a)(5) STATUS: Full Compliance

Items and containers may be excepted from the radioactive material labeling requirements of § 835.605 when: Installed in manufacturing, process, or other equipment, such as reactor components, piping, and tanks.

(X) Guidance

COMPLIANCE STATEMENT:
Items and containers MAY be excepted from the radioactive material labeling requirements of § 835.605 when: Installed in manufacturing, process, or other equipment, such as reactor components, piping, and tanks.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 412.2.L.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 606(a)(5) End.
10CFR835: 606(a)(6)  STATUS: Not applicable

Items and containers may be excepted from the radioactive material labeling requirements of § 835.605 when: The radioactive material consists solely of nuclear weapons or their components.

( ) Statutory
( ) Mandatory
(X) Guidance

COMPLIANCE STATEMENT:
SLAC has not worked or handled, nor is there any plan to work or handle, radioactive material which radioactive material consists solely of nuclear weapons or their components. Therefore, this guidance is not applicable.

ACTIONS/DOCUMENTS:
None

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
             MAIN FACILITY

10CFR835: 606(b)    STATUS: Full Compliance

Radioactive material labels applied to sealed radioactive sources may be excepted from the color specifications of § 835.601(a)

( ) Statutory
( ) Mandatory
(X) Guidance

COMPLIANCE STATEMENT:
Radioactive material labels applied to sealed radioactive sources MAY be excepted from the color specifications of § 835.601(a)

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 431.2.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 606(b) End.
10/15/1999      STANFORD LINEAR ACCELERATOR CENTER
               MAIN FACILITY

10CFR835: 701(a)                          STATUS: Full Compliance

**Records shall be maintained to document compliance with this part and with radiation protection programs required by § 835.101.**

( ) Statutory
(X) Mandatory
( ) Guidance

**COMPLIANCE STATEMENT:**
Records SHALL be maintained to document compliance with this part and with radiation protection programs required by §835.101.

**ACTIONS/DOCUMENTS:**
SLAC *RadCon Manual* Article 712.1, 712.1.A, B, H, and 751.2.E.

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Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 701(a) End.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
              MAIN FACILITY

10CFR835: 701(b)    STATUS: Full Compliance

Unless otherwise specified in this subpart, records shall be retained until final disposition is authorized by DOE.

() Statutory
(X) Mandatory
() Guidance

COMPLIANCE STATEMENT:
Unless otherwise specified in this subpart, records SHALL be retained until final disposition is authorized by DOE.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 774.1.

Headquarters Technical Reviewer:    Operations Office Technical Reviewer:
Headquarters Program Reviewer:    Operations Office Technical Reviewer:
Surveillance Number:    Review Number:

10CFR835: 701(b) End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835:  702(a)  STATUS: Full Compliance

Records shall be maintained to document doses received by all individuals for whom monitoring was required pursuant to § 835.402 and to document doses received during planned special exposures, unplanned doses exceeding the monitoring thresholds of § 835.402, and authorized emergency exposures.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Records SHALL be maintained to document doses received by all individuals for whom monitoring was required pursuant to § 835.402 and to document doses received during planned special exposures, unplanned doses exceeding the monitoring thresholds of § 835.402, and authorized emergency exposures.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 722.1. and 712.1.C.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835:  702(a) End.
<table>
<thead>
<tr>
<th>10/15/1999 STANFORD LINEAR ACCELERATOR CENTER MAIN FACILITY</th>
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<tr>
<td>10CFR835: 702(b) STATUS: Full Compliance</td>
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</tbody>
</table>

The results of individual external and internal dose monitoring that is performed, but not required by § 835.402, shall be recorded. Recording of the non-uniform shallow dose equivalent to the skin is not required if the dose is less than 2 percent of the limit specified for the skin at § 835.202(a)(4).

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The results of individual external and internal dose monitoring that is performed, but not required by § 835.402 SHALL be recorded. Recording of the non-uniform shallow dose equivalent to the skin is not required if the dose is less than 2 percent of the limit specified for the skin at § 835.202(a)(4).

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 722.11.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 702(b) End.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
             MAIN FACILITY

10CFR835:  702(c)(1)        STATUS: Full Compliance

The records required by this section shall:  Be sufficient to evaluate compliance with subpart C of this part

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The (individual monitoring) records required by this section SHALL:  Be sufficient to evaluate compliance with subpart C of this part;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 712.1, 722.4.E (1) and 722.5.D (1).

Headquarters Technical Reviewer:    Operations Office Technical Reviewer:

Headquarters Program Reviewer:      Operations Office Technical Reviewer:

Surveillance Number:               Review Number:

10CFR835:  702(c)(1) End.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835:  702(c)(2)    STATUS: Full Compliance

The records required by this section shall: Be sufficient to provide dose information
necessary to complete reports required by subpart I of this part;

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The (individual monitoring) records required by this section SHALL: Be sufficient to
provide dose information necessary to complete reports required by subpart I of this part;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 722.4.E (2) and 722.5.D (2).

Headquarters Technical Reviewer:    Operations Office Technical Reviewer:

Headquarters Program Reviewer:    Operations Office Technical Reviewer:

Surveillance Number:    Review Number:

10CFR835:  702(c)(2) End.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
              MAIN FACILITY (1)

10CFR835: 702(c)(3)(i)    STATUS: Full Compliance

The records required by this section shall: Include the following quantities for
external dose received during the year: The effective dose equivalent from external
sources of radiation (deep dose equivalent may be used as effective dose equivalent
for external exposure);

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The (individual monitoring) records required by this section SHALL: Include the
following quantities for external dose received during the year: The effective dose
equivalent from external sources of radiation (deep dose equivalent MAY be used as
effective dose equivalent for external exposure);

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 512.4 and 722.4.F (1).

Headquarters Technical Reviewer:    Operations Office Technical Reviewer:

Headquarters Program Reviewer:    Operations Office Technical Reviewer:

Surveillance Number:    Review Number:

10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 702(c)(3)(ii)  STATUS: Full Compliance

The records required by this section shall: Include the following quantities for external dose received during the year: The lens of the eye dose equivalent;

(X) Statutory
( ) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The (individual monitoring) records required by this section SHALL: Include the following quantities for external dose received during the year: The lens of the eye dose equivalent;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 512.4 and 722.4.F (2).

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10/15/1999     STANFORD LINEAR ACCELERATOR CENTER
               MAIN FACILITY

10CFR835: 702(c)(3)(iii)                      STATUS: Full Compliance

The records required by this section shall: Include the following quantities for
external dose received during the year: The shallow dose equivalent to the skin; and

(X) Statutory
( ) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The (individual monitoring) records required by this section SHALL: Include the
following quantities for external dose received during the year: The shallow dose
equivalent to the skin; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 512.4 and 722.4.F (3).

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 702(c)(3)(iv)    STATUS: Full Compliance

The records required by this section shall: Include the following quantities for external dose received during the year: The shallow dose equivalent to the extremities.

( ) Statutory  
(X) Mandatory  
( ) Guidance

COMPLIANCE STATEMENT:
The (individual monitoring) records required by this section SHALL: Include the following quantities for external dose received during the year: The shallow dose equivalent to the extremities.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 512.4, and 722.4 F (4).

Headquarters Technical Reviewer:   Operations Office Technical Reviewer:

Headquarters Program Reviewer:   Operations Office Technical Reviewer:

Surveillance Number:   Review Number:

10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 702(c)(4)(i)  STATUS: Full Compliance

The records required by this section shall: Include the following information for internal dose resulting from intakes received during the year: Committed effective dose equivalent

( ) Statutory  (X) Mandatory  ( ) Guidance

COMPLIANCE STATEMENT:
The (individual monitoring) records required by this section SHALL: Include the following information for internal dose resulting from intakes received during the year: Committed effective dose equivalent

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 722.5.E (1).

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 702(c)(4)(i) End.
The records required by this section shall: Include the following information for internal dose resulting from intakes received during the year: Committed dose equivalent to any organ of tissue of concern; and

(X) Mandatory

COMPLIANCE STATEMENT:
The (individual monitoring) records required by this section SHALL: Include the following information for internal dose resulting from intakes received during the year: Committed dose equivalent to any organ of tissue of concern; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 722.5.E (2).

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 702(c)(4)(ii) End.
The records required by this section shall: Include the following quantities for internal dose resulting from intakes received during the year: Identity of radionuclides.

<table>
<thead>
<tr>
<th>Statutory</th>
<th>Mandatory</th>
<th>Guidance</th>
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<tbody>
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<td>( )</td>
<td>(X)</td>
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</table>

COMPLIANCE STATEMENT:
The (individual monitoring) records required by this section SHALL: Include the following information for internal dose resulting from intakes received during the year: Identity of radionuclides.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 722.5.E (3).

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 702(c)(4)(iii) End.
10/15/1999 STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 702(c)(5)(i) STATUS: Full Compliance

The records required by this section shall: Include the following quantities for the
summation of the external and internal dose: Total effective dose equivalent in a
year;

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The (individual monitoring) records required by this section SHALL: Include the
following quantities for the summation of the external and internal dose: Total effective
dose equivalent in a year;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 722.6.A.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 702(c)(5)(i) End.
10CFR835: 702(c)(5)(ii)  STATUS: Full Compliance

The records required by this section shall: Include the following quantities for the summation of the external and internal dose: For any organ or tissue assigned an internal dose during the year, the sum of the deep dose equivalent from external exposures and the committed dose equivalent to that organ or tissue; and

(X) Mandatory

COMPLIANCE STATEMENT:
The (individual monitoring) records required by this section SHALL: Include the following quantities for the summation of the external and internal dose: For any organ or tissue assigned an internal dose during the year, the sum of the deep dose equivalent from external exposures and the committed dose equivalent to that organ or tissue; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 722.6.B.

10CFR835: 702(c)(5)(ii) End.
10CFR835: 702(c)(5)(iii) STATUS: Partial Compliance

**The records required by this section shall:** Include the following quantities for the summation of the external and internal dose: Cumulative total effective dose equivalent.

( ) Statutory  
(X) Mandatory  
( ) Guidance

**COMPLIANCE STATEMENT:**
The (individual monitoring) records required by this section SHALL: Include the following quantities for the summation of the external and internal dose: Cumulative total effective dose equivalent (TEDE).

**ACTIONS/DOCUMENTS:**
SLAC RadCon Manual Article 722.6.C.; by 12/31/99, SLAC shall have added a feature to its individual radiological worker dose report format to display the best available Cumulative TEDE information.

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Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 702(c)(5)(iii) End.
10/15/1999 STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 702(c)(6) STATUS: Full Compliance

The records required by this section shall: Include the dose equivalent to the embryo/fetus of a declared pregnant worker.

(X) Statutory
( ) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The (individual monitoring) records required by this section SHALL: Include the dose equivalent to the embryo/fetus of a declared pregnant worker.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 722.7.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 702(c)(6) End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER  
MAIN FACILITY  

10CFR835: 702(d).01  STATUS: Full Compliance  

**Documented of all occupational exposure received during the current year, except for doses resulting from planned special exposures conducted in compliance with § 835.204 and emergency exposures authorized in accordance with § 835.1302(d), shall be obtained to demonstrate compliance with § 835.202(a)** 

( ) Statutory  
(X) Mandatory  
( ) Guidance  

COMPLIANCE STATEMENT:  
Documentation of all occupational exposure received during the current year, except for doses resulting from planned special exposures conducted in compliance with § 835.204 and emergency exposures authorized in accordance with § 835.1302(d), SHALL be obtained to demonstrate compliance with § 835.202(a)  

**ACTIONS/DOCUMENTS:**  
SLAC *RadCon Manual* Article 213.2.C.  

Headquarters Technical Reviewer:  
Headquarters Program Reviewer:  
Surveillance Number:  

Operations Office Technical Reviewer:  
Review Number:  

10CFR835: 702(d).01 End.
10CFR835: 702(d).02                      STATUS: Full Compliance

If complete records documenting previous occupational dose during the year cannot be obtained, a written estimate signed by the individual may be accepted to demonstrate compliance.

(X) Mandatory

COMPLIANCE STATEMENT:
If complete records documenting previous occupational dose during the year cannot be obtained, a WRITTEN ESTIMATE SIGNED by the individual may be accepted to demonstrate compliance.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.2.C.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 702(d).02 End.
For radiological workers whose occupational exposure is monitored in accordance with § 835.402, reasonable efforts shall be made to obtain complete records of prior years occupational internal and external exposure.

COMPLIANCE STATEMENT:
For radiological workers whose occupational exposure is monitored in accordance with § 835.402, reasonable efforts SHALL be made to obtain complete records of prior years occupational internal and external exposure.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 721.0.
10CFR835: 702(f)  STATUS: Full Compliance

The records specified in this section that are identified with a specific individual shall be readily available to that individual.

() Statutory
(X) Mandatory
() Guidance

COMPLIANCE STATEMENT:
The records specified in this section that are identified with a specific individual SHALL be readily available to that individual.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 712.4 and 781.0

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 702(f) End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
             MAIN FACILITY

10CFR835:  702(g)  STATUS: Full Compliance

Data necessary to allow future verification or reassessment of the recorded doses
shall be recorded.

(X) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Data necessary to allow future verification or reassessment of the recorded doses SHALL
be recorded.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 722.3.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835:  702(g) End.
10CFR835: 702(h) STATUS: Full Compliance

All records required by this section shall be transferred to the DOE upon cessation of activities at the site that could cause exposure to individuals.

(X) Mandatory

COMPLIANCE STATEMENT:
All records required by this section SHALL be transferred to the DOE upon cessation of activities at the site that could cause exposure to individuals.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 774.2

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 702(h) End.
The following information shall be documented and maintained: Results of surveys for radiation and radioactive material as required by subparts E and L of this part, except for monitoring required by § 835.1102(d);

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The following information SHALL be documented and maintained: Results of surveys for radiation and radioactive material as required by subparts E and L of this part, except for monitoring required by § 835.1102(d);

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 712.1.H and 751.2.A.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 703(a) End.
10/15/1999 STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 703(b) STATUS: Full Compliance

The following information shall be documented and maintained: Results of monitoring used to determine individual occupational dose from external and internal sources;

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The following information SHALL be documented and maintained: Results of monitoring used to determine individual occupational dose from external and internal sources;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 722.6.D and 751.2.B.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 703(b) End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 703(c)  STATUS: Full Compliance

The following information shall be documented and maintained: Results of monitoring for the release and control of material and equipment as required by § 835.1101; and

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The following information SHALL be documented and maintained: Results of monitoring for the release and control of material and equipment as required by §835.1101; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 421.7, 712.1.P and 751.2.C.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 703(c) End.
The following information shall be documented and maintained: Results of maintenance and calibration performed on instruments and equipment as required by § 835.401(b).

(☐) Statutory  (☐) Mandatory  (☐) Guidance

COMPLIANCE STATEMENT:
The following information SHALL be documented and maintained: Results of maintenance and calibration performed on instruments and equipment as required by §835.401(b).

ACTIONS/DOCUMENTS:

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 703(d) End.
10/15/1999       STANFORD LINEAR ACCELERATOR CENTER
                  MAIN FACILITY

10CFR835: 704(a)       STATUS: Full Compliance

Training records shall be maintained, as necessary, to demonstrate compliance with § 835.901.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Training records SHALL be maintained, as necessary, to demonstrate compliance with § 835.901.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 712.1.E and 725.3 and 725.4.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 704(a) End.
10/15/1999      STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 704(b)          STATUS: Full Compliance

Actions taken to maintain occupational exposures as low as reasonably achievable, including the actions required for this purpose by § 835.101, as well as facility design and control actions required by §§ 835.1001, 835.1002, and 835.1003, shall be documented.

(X) Statutory
( ) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Actions taken to maintain occupational exposures as low as reasonably achievable, including the actions required for this purpose by §835.101, as well as facility design and control actions required by §§ 835.1001, 835.1002, and 835.1003, SHALL be documented.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 712.1.F and 742.

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Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 704(b) End.
10CFR835: 704(c)  STATUS: Full Compliance

**Records shall be maintained to document the results of internal audits and other reviews of program content and implementation.**

(X) Mandatory

COMPLIANCE STATEMENT:
Records SHALL be maintained to document the results of internal audits and other reviews of program content and implementation.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 743.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 704(c) End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
            MAIN FACILITY

10CFR835:  704(d)  STATUS: Full Compliance

**Written declarations of pregnancy, including the estimated date of conception, and revocations of declarations of pregnancy shall be maintained.**

( ) Statutory
(X) Mandatory
( ) Guidance

**COMPLIANCE STATEMENT:**
Written declarations of pregnancy, including the estimated date of conception, and revocations of declarations of pregnancy SHALL be maintained.

**ACTIONS/DOCUMENTS:**
SLAC RadCon Manual Article 722.8.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 704(d) End.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
             MAIN FACILITY

10CFR835:  704(e)    STATUS: Full Compliance

Changes in equipment, techniques, and procedures used for monitoring shall be documented.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Changes in equipment, techniques, and procedures used for monitoring SHALL be documented.

ACTIONS/DOCUMENTS:

Headquarters Technical Reviewer:    Operations Office Technical Reviewer:
Headquarters Program Reviewer:    Operations Office Technical Reviewer:
Surveillance Number:    Review Number:

10CFR835:  704(e) End.
10/15/1999 STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 704(f) STATUS: Full Compliance

Records shall be maintained as necessary to demonstrate compliance with the requirements of §§ 835.1201 and 835.1202 for sealed radioactive source control, inventory, and source leak tests.

(X) Statutory
( ) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Records shall be maintained as necessary to demonstrate compliance with the requirements of §§ 835.1201 and 835.1202 for sealed radioactive source control, inventory, and source leak tests.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article712.1.O and 751.2.D.

Headquarters Technical Reviewer:
Operations Office Technical Reviewer:

Headquarters Program Reviewer:
Operations Office Technical Reviewer:

Surveillance Number:
Review Number:

10CFR835: 704(f) End.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
              MAIN FACILITY

10CFR835:  801(a).01                  STATUS: Full Compliance

Radiation exposure data for individuals monitored in accordance with § 835.402
shall be reported as specified in this section.

(X) Statutory
( ) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Radiation exposure data for individuals monitored in accordance with § 835.402 SHALL
be reported as specified in this section.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 781.0

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 801(a).01 End.
The information (radiation exposure data) shall include the data required under § 835.702(c).

COMPLIANCE STATEMENT:
The information (radiation exposure data) SHALL include the data required under § 835.702(c).

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 781.1

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 801(a).02 End.
10/15/1999 STANFORD LINEAR ACCELERATOR CENTER MAIN FACILITY

10CFR835: 801(a).03 STATUS: Full Compliance

Each notification and report shall be in writing and include: the DOE site or facility name, the name of the individual, and the individual's social security number, employee number, or other unique identification number.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Each notification (radiation exposure data) and report SHALL be in writing and include: the DOE site or facility name, the name of the individual, and the individual's social security number, employee number, or other unique identification number.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 781.2.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 801(a).03 End.
10/15/1999      STANFORD LINEAR ACCELERATOR CENTER
              MAIN FACILITY

10CFR835: 801(b).01 STATUS: Full Compliance

**Upon the request from an individual terminating employment, records of exposure shall be provided to that individual as soon as the data are available, but not later than 90 days after termination.**

( ) Statutory
(X) Mandatory
( ) Guidance

**COMPLIANCE STATEMENT:**
Upon the request from an individual terminating employment, records of exposure SHALL be provided to that individual as soon as the data are available, but not later than 90 days after termination.

**ACTIONS/DOCUMENTS:**
SLAC *RadCon Manual* Article 781.3

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 801(b).01 End.
10/15/1999      STANFORD LINEAR ACCELERATOR CENTER
               MAIN FACILITY

10CFR835:  801(b).02  STATUS: Full Compliance

A written estimate of the radiation dose received by that employee based on available information shall be provided at the time of termination, if requested.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
A written estimate of the radiation dose received by that employee based on available information SHALL be provided at the time of termination, if requested.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 781.4.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835:  801(b).02 End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835:  801(c)  STATUS: Full Compliance

Each DOE- or DOE-contractor-operated site or facility shall, on an annual basis, provide a radiation dose report to each individual monitored during the year at that site or facility in accordance with § 835.402.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
SLAC SHALL, on an annual basis, provide a radiation dose report to each individual monitored during the year at that site or facility in accordance with § 835.402.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 781.5.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835:  801(c) End.
November 17, 1999

10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
           MAIN FACILITY

10CFR835: 801(d)  STATUS: Full Compliance

Detailed information concerning any individual's exposure shall be made available to
the individual upon request of that individual, consistent with the provisions of the

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Detailed information concerning any individual's exposure SHALL be made available to
the individual upon request of that individual, consistent with the provisions of the

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 712.4.

Headquarters Technical Reviewer:  Operations Office Technical Reviewer:

Headquarters Program Reviewer:  Operations Office Technical Reviewer:

Surveillance Number:  Review Number:

10CFR835: 801(d) End.
When a DOE contractor is required to report to the Department, pursuant to Departmental requirements for occurrence reporting and processing, any exposure of an individual to radiation and/or radioactive material, or planned special exposure in accordance with § 835.204(e), the contractor shall also provide that individual with a report on his or her exposure data included therein.

COMPLIANCE STATEMENT:
When SLAC is required to report to the Department, pursuant to Departmental requirements for occurrence reporting and processing, any exposure of an individual to radiation and/or radioactive material, or planned special exposure in accordance with § 835.204(e), SLAC SHALL also provide that individual with a report on his or her exposure data included therein.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 722.12.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10 CFR 835:  801(e).02    STATUS: Full Compliance

Such report shall be transmitted at a time not later than the transmittal to the Department.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Such report (radiation exposure data report) SHALL be transmitted at a time not later than the transmittal to the Department.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 722.12.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10 CFR 835: 801(e).02 End.
10CFR835: 901(a)(1) STATUS: Full Compliance

Each individual shall complete radiation safety training on the topics established at § 835.901(c) commensurate with the hazards in the area and the required controls: Before being permitted unescorted access to controlled areas;

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Each individual SHALL complete radiation safety training on the topics established at § 835.901(c) commensurate with the hazards in the area and the required controls: Before being permitted unescorted access to controlled areas at SLAC;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 612.1 and 621.0.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 901(a)(1) End.
Each individual shall complete radiation safety training on the topics established at § 835.901(c) commensurate with the hazards in the area and the required controls: Before receiving occupational dose during access to controlled areas at a DOE site or facility.

COMPLIANCE STATEMENT:
Each individual SHALL complete radiation safety training on the topics established at § 835.901(c) commensurate with the hazards in the area and the required controls: Before receiving occupational dose during access to controlled areas at SLAC.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 621.0.
Each individual shall demonstrate knowledge of the radiation safety training topics established in § 835.901(c), commensurate with the hazards in the area and required controls, by successful completion of an examination and performance demonstrations: Before being permitted unescorted access to radiological areas; and

COMPLIANCE STATEMENT:
Each individual SHALL demonstrate knowledge of the radiation safety training topics established in § 835.901(c), commensurate with the hazards in the area and required controls, by successful completion of an examination and performance demonstrations: Before being permitted unescorted access to radiological areas at SLAC; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 621 and 631.1.A

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 901(b)(1) End.
10/15/1999   STANFORD LINEAR ACCELERATOR CENTER  
             MAIN FACILITY 

10CFR835: 901(b)(2)   STATUS: Full Compliance  

Each individual shall demonstrate knowledge of the radiation safety training topics established in § 835.901(c), commensurate with the hazards in the area and required controls, by successful completion of an examination and performance demonstrations: Before performing unescorted assignments as a radiological worker.

() Statutory  
(X) Mandatory  
() Guidance  

COMPLIANCE STATEMENT:  
Each individual SHALL demonstrate knowledge of the radiation safety training topics established in § 835.901(c), commensurate with the hazards in the area and required controls, by successful completion of an examination and performance demonstrations: Before performing unescorted assignments as a radiological worker.

ACTIONS/DOCUMENTS:  

Headquarters Technical Reviewer: Operations Office Technical Reviewer:  
Headquarters Program Reviewer: Operations Office Technical Reviewer:  
Surveillance Number: Review Number:  

10CFR835: 901(b)(2) End.
Radiation safety training shall include the following topics, to the extent appropriate to each individual’s prior training, work assignments, and degree of exposure to potential radiological hazards:

1. Risks of exposure to radiation and radioactive materials, including prenatal exposure;
2. Basic radiological fundamentals and radiation protection concepts;
3. Physical design features, administrative controls, limits, policies, procedures, alarms, and other measures implemented at the facility to manage doses and maintain doses ALARA, including both routine and emergency actions;
4. Individual rights and responsibilities as related to implementation of the facility radiation protection program;
5. Individual responsibilities for implementing ALARA measures required by § 835.101; and
6. Individual exposure reports that may be requested in accordance with § 835.101.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 613.1.

10CFR835: 901(c)
10/15/1999   STANFORD LINEAR ACCELERATOR CENTER
    MAIN FACILITY

10CFR835: 901(c)    STATUS: Full Compliance

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 901(c) End.
When an escort is used in lieu of training in accordance with paragraphs (a) or (b) of this section, the escort shall: Have completed radiation safety training, examinations, and performance demonstrations required for entry to the area and performance of the work; and

COMPLIANCE STATEMENT:
When an escort is used in lieu of training in accordance with paragraphs (a) or (b) of this section, the escort SHALL: Have completed radiation safety training, examinations, and performance demonstrations required for entry to the area and performance of the work; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 336.1 and 622.3.D.
10CFR835: 901(d)(2) STATUS: Full Compliance

When an escort is used in lieu of training in accordance with paragraphs (a) or (b) of this section, the escort shall: Ensure that all escorted individuals comply with the documented radiation protection program.

(X) Mandatory

COMPLIANCE STATEMENT:
When an escort is used in lieu of training in accordance with paragraphs (a) or (b) of this section, the escort SHALL: Ensure that all escorted individuals comply with the documented radiation protection program.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 336.1 and 622.3.D.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 901(d)(2) End.
Radiation safety training shall be provided to individuals when there is a significant change to radiation protection policies and procedures that may affect the individual and at intervals not to exceed 24 months.

( ) Statutory  
(X) Mandatory  
( ) Guidance

COMPLIANCE STATEMENT:
Radiation safety training SHALL be provided to individuals when there is a significant change to radiation protection policies and procedures that may affect the individual and at intervals not to exceed 24 months.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 613.4 and 613.5

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 901(e) 01 End.
Such Training provided for individuals subject to the requirements of § 835.901(b)(1) and (b)(2) shall include successful completion of an examination

COMPLIANCE STATEMENT:
Such Training provided for individuals subject to the requirements of § 835.901(b)(1) and (b)(2) SHALL include successful completion of an examination

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 613.4 and 613.5

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 901(e) 02 End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 1001(a).01  STATUS: Full Compliance

Measures shall be taken to maintain radiation exposure in controlled areas ALARA through physical design features and administrative control.

(X) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Measures SHALL be taken to maintain radiation exposure in controlled areas as low as is reasonably achievable (ALARA) through physical design features and administrative control.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 311.1, .2 and .3.

Headquarters Technical Reviewer:  Operations Office Technical Reviewer:

Headquarters Program Reviewer:  Operations Office Technical Reviewer:

Surveillance Number:  Review Number:

10CFR835: 1001(a).01 End.
Measures shall be taken to maintain radiation exposure in controlled areas ALARA through physical design features and administrative control. The primary methods used shall be physical design features (e.g., confinement, ventilation, remote handling, and shielding).

COMPLIANCE STATEMENT:
Measures SHALL be taken to maintain radiation exposure in controlled areas ALARA through physical design features and administrative control. The primary methods used SHALL be physical design features (e.g., confinement, ventilation, remote handling, and shielding).

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 311.1, 311.2 and 311.3.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 1001(a).02 End.
Measures shall be taken to maintain radiation exposure in controlled areas ALARA through physical design features and administrative control. Administrative controls shall be employed only as supplemental methods to control radiation exposure.

COMPLIANCE STATEMENT:
Measures SHALL be taken to maintain radiation exposure in controlled areas ALARA through physical design features and administrative control. Administrative controls SHALL be employed only as supplemental methods to control radiation exposure.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 311.1, 311.2 and 311.3.
For specific activities where use of physical design features is demonstrated to be impractical, administrative controls shall be used to maintain radiation exposures ALARA.

COMPLIANCE STATEMENT:
For specific activities where use of physical design features is demonstrated to be impractical, administrative controls SHALL be used to maintain radiation exposures ALARA.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 311.1, 311.2 and 311.3.
During the design of new facilities or modification of existing facilities, the following objectives shall be adopted: Optimization methods shall be used to assure that occupational exposure is maintained ALARA in developing and justifying facility design and physical controls.

COMPLIANCE STATEMENT:
During the design of new facilities or modification of existing facilities, the following objectives shall be adopted: Optimization methods SHALL be used to assure that occupational exposure is maintained ALARA in developing and justifying facility design and physical controls.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 128.1.
During the design of new facilities or modification of existing facilities, the following objectives shall be adopted: The design objective for controlling personnel exposure from external sources of radiation in areas of continuous occupational occupancy (2000 hours per year) shall be to maintain exposure levels below an average of 0.5 mrem (5 microsieverts) per hour and as far below this average as is reasonably achievable.

<table>
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<th>Statutory</th>
<th>Mandatory</th>
<th>Guidance</th>
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COMPLIANCE STATEMENT:
During the design of new facilities or modification of existing facilities, the following objectives SHALL be adopted: The design objective for controlling personnel exposure from external sources of radiation in areas of continuous occupational occupancy (2000 hours per year) SHALL be to maintain exposure levels below an average of 0.5 mrem (5 microsieverts) per hour and as far below this average as is reasonably achievable.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 128.2.

[Surveillance Number: ] [Review Number: ]

10CFR835: 1002(b).01 End.
10/15/1999	STANFORD LINEAR ACCELERATOR CENTER
            MAIN FACILITY

10CFR835: 1002(b).02                  STATUS: Full Compliance

During the design of new facilities or modification of existing facilities, the following objectives shall be adopted: The design objectives for exposure rates for potential exposure to a radiological worker where occupancy differs from the above shall be ALARA and shall not exceed 20 percent of the applicable standards in § 835.202.

(X) Mandatory
( ) Statutory
( ) Guidance

COMPLIANCE STATEMENT:
During the design of new facilities or modification of existing facilities, the following objectives SHALL be adopted: The design objectives for exposure rates for potential exposure to a radiological worker where occupancy differs from the above SHALL be ALARA and shall not exceed 20 percent of the applicable standards in §835.202.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 128.2.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1002(b).02 End.
During the design of new facilities or modification of existing facilities, the following objectives shall be adopted: Regarding the control of airborne radioactive material, the design objective shall be, under normal conditions, to avoid releases to the workplace atmosphere and in any situation, to control the inhalation of such material by workers to levels that are ALARA;

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
During the design of new facilities or modification of existing facilities, the following objectives SHALL be adopted: Regarding the control of airborne radioactive material, the design objective SHALL be, under normal conditions, to avoid releases to the workplace atmosphere and in any situation, to control the inhalation of such material by workers to levels that are ALARA;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 223.1, 223.1A, and 453.2

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1002(c).01 End.
During the design of new facilities or modification of existing facilities, the following objectives shall be adopted: Regarding the control of airborne radioactive material, the design objective shall be, under normal conditions, to avoid releases to the workplace atmosphere and in any situation, to control the inhalation of such material by workers to levels that are ALARA; confinement and ventilation SHALL normally be used.

COMPLIANCE STATEMENT:
During the design of new facilities or modification of existing facilities, the following objectives SHALL be adopted: Regarding the control of airborne radioactive material, the design objective SHALL be under normal conditions, to avoid releases to the workplace atmosphere and in any situation, to control the inhalation of such material by workers to levels that are ALARA; confinement and ventilation SHALL normally be used.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Section 223.1.
10/15/1999   STANFORD LINEAR ACCELERATOR CENTER
             MAIN FACILITY

10CFR835: 1002(d)   STATUS: Full Compliance

During the design of new facilities or modification of existing facilities, the following
objectives shall be adopted: The design or modification of a facility and the selection
of materials shall include features that facilitate operations, maintenance,
decontamination, and decommissioning.

() Statutory
(X) Mandatory
() Guidance

COMPLIANCE STATEMENT:
During the design of new facilities or modification of existing facilities, the following
objectives SHALL be adopted: The design or modification of a facility and the selection
of materials SHALL include features that facilitate operations, maintenance,
decontamination, and decommissioning.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 128.3.C, 128.3.D, and 441.2.

Headquarters Technical Reviewer:   Operations Office Technical Reviewer:

Headquarters Program Reviewer:   Operations Office Technical Reviewer:

Surveillance Number:   Review Number:

10CFR835: 1002(d) End.
During routine operations, the combination of physical design features and administrative control shall provide that: The anticipated occupational dose to general employees shall not exceed the limits established at § 835.202; and

COMPLIANCE STATEMENT:
During routine operations, the combination of physical design features and administrative control SHALL provide that: The anticipated occupational dose to general employees SHALL not exceed the limits established at § 835.202; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 211.4.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 1003(a) End.
During routine operations, the combination of physical design features and administrative control shall provide that: The ALARA process is utilized for personnel exposure to ionizing radiation.

COMPLIANCE STATEMENT:
During routine operations, the combination of physical design features and administrative control SHALL provide that: The ALARA process IS utilized for personnel exposure to ionizing radiation.

ACTIONS/DOCUMENTS:
Radiological Safety, Chapter 9.12.2.2.6 and .7, SLAC ES&H Manual (SLAC-I-720-70100-100): "SLAC uses methods of optimization to ensure that occupational exposure is maintained ALARA when developing and justifying the facility design. Physical controls are used during the design of new facilities or major modification of old facilities. Administrative procedures may also be used where older facilities have been rebuilt, upgraded, or in the new use of facilities with different accelerator running conditions." "SLAC ensures integration of appropriate methods for maintaining occupational exposure ALARA during the design process." And SLAC RadCon Manual Article 111 and 128.1
10/15/1999      STANFORD LINEAR ACCELERATOR CENTER
               MAIN FACILITY

10CFR835: 1101(a)(1)    STATUS: Full Compliance

Except as provided in paragraphs (b) and (c) of this section, material and equipment in contamination, high contamination areas, and airborne radioactivity areas shall not be released to a controlled area if: Removable surface contamination levels on accessible surfaces exceed the removable surface contamination values specified in appendix D of this part; or

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Except as provided in paragraphs (b) and (c) of this section, material and equipment in contamination, high contamination areas, and airborne radioactivity areas SHALL NOT be released to a controlled area if: Removable surface contamination levels on accessible surfaces exceed the removable surface contamination values specified in appendix D of this part; or

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 421.1 and 421.9.A, .B.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1101(a)(1) End.
10CFR835: 1101(a)(2) STATUS: Full Compliance

Except as provided in paragraphs (b) and (c) of this section, material and equipment in contamination, high contamination areas, and airborne radioactivity areas shall not be released to a controlled area if: Prior use suggests that removable surface contamination levels on inaccessible surfaces are likely to exceed the removable surface contamination values specified in appendix D of this part.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Except as provided in paragraphs (b) and (c) of this section, material and equipment in contamination, high contamination areas, and airborne radioactivity areas SHALL NOT be released to a controlled area if: Prior use suggests that removable surface contamination levels on inaccessible surfaces are likely to exceed the removable surface contamination values specified in appendix D of this part.

ACTIONS/DOCUMENTS:

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1101(a)(2) End.
Material and equipment exceeding the total or removable surface contamination values specified in appendix D to this part may be conditionally released for movement on-site from one radiological area for immediate placement in another radiological area only if appropriate monitoring is performed and appropriate controls for the movement are established and exercised.

COMPLIANCE STATEMENT:
Material and equipment exceeding the total or removable surface contamination values specified in appendix D to this part MAY be conditionally released for movement on-site from one radiological area for immediate placement in another radiological area only if appropriate MONITORING IS PERFORMED and appropriate controls for the movement are established and exercised.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 421.10.
Material and equipment with fixed contamination levels that exceed the total surface contamination values specified in appendix D to this part may be released for use in controlled areas outside of the radiological areas under the following conditions: Removable surface contamination levels are below the removable surface contamination values specified in appendix D of this part; and

COMPLIANCE STATEMENT:
Material and equipment with fixed contamination levels that exceed the total surface contamination values specified in appendix D to this part may be released for use in controlled areas outside of radiological areas under the following conditions: Removable surface contamination LEVELS ARE BELOW the removable surface contamination values specified in appendix D of this part; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 421.2.
Material and equipment with fixed contamination levels that exceed the total surface contamination values specified in appendix D to this part may be released for use in controlled areas outside of the radiological areas under the following conditions:
The material or equipment is routinely monitored and clearly marked or labeled to alert personnel of the contaminated status.

COMPLIANCE STATEMENT:
Material and equipment with fixed contamination levels that exceed the total surface contamination values specified in appendix D to this part MAY be released for use in controlled areas outside of the radiological areas under the following conditions: The material or equipment IS ROUTINELY MONITORED and clearly marked or labeled to alert personnel of the contaminated status.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 421.2.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 1102(a)  STATUS: Full Compliance

Appropriate controls shall be maintained and verified which prevent the inadvertent transfer of removable contamination to locations outside of radiological areas under normal operating conditions.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Appropriate controls SHALL be maintained and verified which prevent the inadvertent transfer of removable contamination to locations outside of radiological areas under normal operating conditions.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 342.1 and 463.3

Headquarters Technical Reviewer:  Operations Office Technical Reviewer:

Headquarters Program Reviewer:  Operations Office Technical Reviewer:

Surveillance Number:  Review Number:

10CFR835: 1102(a) End.
Any area in which contamination levels exceed the values specified in appendix D of this part shall be controlled in a manner commensurate with the physical and chemical characteristics of the contaminant, the radionuclides present, and the fixed and removable surface contamination levels.

COMPLIANCE STATEMENT:
Any area in which contamination levels exceed the values specified in appendix D of this part SHALL be controlled in a manner commensurate with the physical and chemical characteristics of the contaminant, the radionuclides present, and the fixed and removable surface contamination levels.

ACTIONS/DOCUMENTS:
SLAC *RadCon Manual* Article 222.1.
10CFR835: 1102(c)(1) STATUS: Full Compliance

Areas accessible to individuals where the measured total surface contamination levels exceed, but the removable surface contamination levels are less than, corresponding surface contamination values specified in appendix D of this part, shall be controlled as follows when located outside of radiological areas: The area shall be routinely monitored to ensure the removable contamination level remains below the removable surface contamination values specified in appendix D of this part; and

(X) Mandatory

COMPLIANCE STATEMENT:
Areas accessible to individuals where the measured total surface contamination levels exceed, but the removable surface contamination levels are less than, corresponding surface contamination values specified in appendix D of this part, SHALL be controlled as follows when located outside of radiological areas: The area SHALL be routinely monitored to ensure the removable contamination level remains below the removable surface contamination values specified in appendix D of this part; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 222.3. F.2 and 453.2.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1102(c)(1) End.
Areas accessible to individuals where the measured total surface contamination levels exceed, but the removable surface contamination levels are less than, corresponding surface contamination values specified in appendix D of this part, shall be controlled as follows when located outside of radiological areas: The area shall be conspicuously marked to warn individuals of the contaminated status.

COMPLIANCE STATEMENT:
Areas accessible to individuals where the measured total surface contamination levels exceed, but the removable surface contamination levels are less than, corresponding surface contamination values specified in appendix D of this part, SHALL be controlled as follows when located outside of radiological areas: The area SHALL be conspicuously marked to warn individuals of the contaminated status.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 222.3.F.1.
10CFR835: 1102(d) STATUS: Full Compliance

Individuals exiting contamination, high contamination, or airborne radioactivity areas shall be monitored, as appropriate, for the presence of surface contamination.

(X) Mandatory

COMPLIANCE STATEMENT:
Individuals exiting contamination, high contamination, or airborne radioactivity areas SHALL be monitored, as appropriate, for the presence of surface contamination.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 335.3

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1102(d) End.
Protective clothing shall be required for entry to areas in which removable contamination exists at levels exceeding the removable surface contamination values specified in appendix D of this part.

COMPLIANCE STATEMENT:
Protective clothing SHALL be required for entry to areas in which removable contamination exists at levels exceeding the removable surface contamination values specified in appendix D of this part.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 325.1, 335 1.C and 2.C
Sealed radioactive sources shall be used, handled, and stored in a manner commensurate with the hazards associated with operations involving the sources.

( ) Statutory  
(X) Mandatory  
( ) Guidance

COMPLIANCE STATEMENT:
Sealed radioactive sources shall be used, handled, and stored in a manner commensurate with the hazards associated with operations involving the sources.

ACTIONS/DOCUMENTS:

SLAC RadCon Manual Article 431.0. (Note: this Article begins with the following: “All sealed radioactive sources will be identified and tracked via an inventory database including location of each source. Included as sealed sources at SLAC are generally-licensed radioactive devices as defined in Title 17 Section 30192 of the California Code of Regulations. Generally-licensed devices are to be treated at SLAC as non-accountable sealed sources. Exempted from any and all requirements of this Article of the SLAC RadCon Manual is any exempt radioactive product as defined in Title 17 Section 30180 of the California Code of Regulations. The inventory will be verified on at least a calendar year basis. However, only accountable sealed radioactive sources shall be subject to the following provisions and controls.”).

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1201 End.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
               MAIN FACILITY

10CFR835:  1202(a)    STATUS: Full Compliance

Each accountable sealed radioactive source shall be inventoried at intervals not to exceed six months.

() Statutory
(X) Mandatory
() Guidance

COMPLIANCE STATEMENT:
Each accountable sealed radioactive source SHALL be inventoried at intervals not to exceed six months.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 431.3

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835:  1202(a) End.
10CFR835: 1202(a)(1) STATUS: Full Compliance

Each accountable sealed radioactive source shall be inventoried at intervals not to exceed six months. This inventory shall: Establish the physical location of each accountable sealed radioactive source;

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Each accountable sealed radioactive source SHALL be inventoried at intervals not to exceed six months. This inventory SHALL: Establish the physical location of each accountable sealed radioactive source;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 431.3.A.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 1202(a)(1) End.
Each accountable sealed radioactive source shall be inventoried at intervals not to exceed six months. This inventory shall: Verify the presence and adequacy of associated postings and labels; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 431.3.B.
10CFR835: 1202(a)(3)  STATUS: Full Compliance

Each accountable sealed radioactive source shall be inventoried at intervals not to exceed six months. This inventory shall: Establish the adequacy of storage locations, containers and devices.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Each accountable sealed radioactive source SHALL be inventoried at intervals not to exceed six months. This inventory SHALL: Establish the adequacy of storage locations, containers and devices.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 431.3.C.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
            MAIN FACILITY

10CFR835: 1202(b) 01    STATUS: Full Compliance

Except for sealed radioactive sources consisting of gaseous radioactive material or tritium, each accountable sealed radioactive source shall be subject to a source leak test upon receipt,

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Except for sealed radioactive sources consisting of gaseous radioactive material or tritium, each accountable sealed radioactive source SHALL be subject to a source leak test upon receipt,

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 431.4.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 1202(b) 01 End.
10/15/1999
STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 1202(b) 02  STATUS: Full Compliance

Except for sealed radioactive sources consisting of gaseous radioactive material or tritium, each accountable sealed radioactive source shall be subject to a source leak test when damage is suspected

() Statutory
(X) Mandatory
() Guidance

COMPLIANCE STATEMENT:
Except for sealed radioactive sources consisting of gaseous radioactive material or tritium, each accountable sealed radioactive source SHALL be subject to a source leak test when damage is suspected

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 431.4.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 1202(b) 02 End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 1202(b) 03  STATUS: Full Compliance

Except for sealed radioactive sources consisting of gaseous radioactive material or tritium, each accountable sealed radioactive source shall be subject to a source leak test and at intervals not to exceed six months.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Except for sealed radioactive sources consisting of gaseous radioactive material or tritium, each accountable sealed radioactive source SHALL be subject to a source leak test and at intervals not to exceed six months.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 431.4.

Headquarters Technical Reviewer:  Operations Office Technical Reviewer:

Headquarters Program Reviewer:  Operations Office Technical Reviewer:

Surveillance Number:  Review Number:

10CFR835: 1202(b) 03 End.
Source leak tests shall be capable of detecting radioactive material leakage to or exceeding 0.005 microcurie.

COMPLIANCE STATEMENT:
Source leak tests SHALL be capable of detecting radioactive material leakage to or exceeding 0.005 microcurie.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 431.5.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1202(b) 04 End.
10CFR835: 1202(c) 01  STATUS: Full Compliance

Notwithstanding the requirements of paragraph (b) of this section, an accountable sealed radioactive source is not subject to periodic source leak testing if that source has been removed from service.

( ) Statutory  ( ) Mandatory  (X) Guidance

COMPLIANCE STATEMENT:
Notwithstanding the requirements of paragraph (b) of this section, an accountable sealed radioactive source is not subject to periodic source leak testing if that source has been removed from service.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 431.6.

Headquarters Technical Reviewer:  Operations Office Technical Reviewer:

Headquarters Program Reviewer:  Operations Office Technical Reviewer:

Surveillance Number:  Review Number:

10CFR835: 1202(c) 01 End.
Notwithstanding the requirements of paragraph (b) of this section, an accountable sealed radioactive source is not subject to periodic source leak testing if that source has been removed from service. Such sources shall be stored in a controlled location,
Notwithstanding the requirements of paragraph (b) of this section, an accountable sealed radioactive source is not subject to periodic source leak testing if that source has been removed from service. Such sources shall be subject to periodic inventory as required by paragraph (a) of this section, and

(X) Mandatory

COMPLIANCE STATEMENT:
Notwithstanding the requirements of paragraph (b) of this section, an accountable sealed radioactive source is not subject to periodic source leak testing if that source has been removed from service. Such sources SHALL be subject to periodic inventory as required by paragraph (a) of this section, and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 431.6.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1202(c) 03 End.
### Radiation Protection Program Implementation Plan – 1999 Revision

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**10/15/1999**  STANFORD LINEAR ACCELERATOR CENTER  
MAIN FACILITY

| 10CFR835: 1202(c) 04 | STATUS: Full Compliance |

**Notwithstanding the requirements of paragraph (b) of this section, an accountable sealed radioactive source is not subject to periodic source leak testing if that source has been removed from service. Such sources shall be subject to source leak testing prior to being returned to service.**

- ( ) Statutory
- (X) Mandatory
- ( ) Guidance

**COMPLIANCE STATEMENT:**  
Notwithstanding the requirements of paragraph (b) of this section, an accountable sealed radioactive source is not subject to periodic source leak testing if that source has been removed from service. Such sources SHALL be subject to source leak testing prior to being returned to service.

**ACTIONS/DOCUMENTS:**  
SLAC *RadCon Manual* Article 431.6.

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**10CFR835: 1202(c) 04 End.**
10/15/1999 STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 1202(d) STATUS: Full Compliance

Notwithstanding the requirements of paragraphs (a) and (b) of this section, an accountable sealed radioactive source is not subject to periodic inventory and source leak testing if that source is located in an area that is unsafe for human entry or otherwise inaccessible.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Notwithstanding the requirements of paragraphs (a) and (b) of this section, an accountable sealed radioactive source is not subject to periodic inventory and source leak testing if that source IS LOCATED in an area that is unsafe for human entry or otherwise inaccessible.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 431.7.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1202(d) End.
10/15/1999        STANFORD LINEAR ACCELERATOR CENTER
                  MAIN FACILITY

10CFR835: 1202(e)             STATUS: Full Compliance

An accountable sealed radioactive source found to be leaking radioactive material
shall be controlled in a manner that minimizes the spread of radioactive
contamination.

(X) Statutory
( ) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
An accountable sealed radioactive source found to be leaking radioactive material SHALL
be controlled in a manner that minimizes the spread of radioactive contamination.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 431.8.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1202(e)   End.
A general employee whose occupational exposure has exceeded the numerical value of any of the limits specified in § 835.202 as a result of an authorized emergency exposure may be permitted to return to work in radiological areas during the current year providing that all of the following conditions are met: Approval is first obtained from the contractor management and the Head of the responsible DOE field organization;

COMPLIANCE STATEMENT:
A general employee whose occupational exposure has exceeded the numerical value of any of the limits specified in § 835.202 as a result of an authorized emergency exposure may be permitted to return to work in radiological areas during the current year providing that all of the following conditions are met: APPROVAL IS FIRST OBTAINED from the contractor management and the Head of the responsible DOE field organization;

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.5 and 5.A

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1301(a)(1) End.
A general employee whose occupational exposure has exceeded the numerical value of any of the limits specified in § 835.202 as a result of an authorized emergency exposure may be permitted to return to work in radiological areas during the current year providing that all of the following conditions are met: The individual receives counseling from radiological protection and medical personnel regarding the consequences of receiving additional occupational exposure during the year; and

COMPLIANCE STATEMENT:
A general employee whose occupational exposure has exceeded the numerical value of any of the limits specified in § 835.202 as a result of an authorized emergency exposure may be permitted to return to work in radiological areas during the current year providing that all of the following conditions are met: The individual RECEIVES COUNSELING from radiological protection and medical personnel regarding the consequences of receiving additional occupational exposure during the year; and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.5.B.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1301(a)(2) End.
A general employee whose occupational exposure has exceeded the numerical value of any of the limits specified in §§ 835.202 as a result of an authorized emergency exposure may be permitted to return to work in radiological areas during the current year providing that all of the following conditions are met: The affected employee AGREES to return to radiological work.

COMPLIANCE STATEMENT:
A general employee whose occupational exposure has exceeded the numerical value of any of the limits specified in §§835.202 as a result of an authorized emergency exposure may be permitted to return to work in radiological areas during the current year providing that all of the following conditions are met: The affected employee AGREES to return to radiological work.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.5.C.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveyance Number: Review Number:

10/15/1999      STANFORD LINEAR ACCELERATOR CENTER
               MAIN FACILITY (1)

10CFR835: 1301(b) STATUS: Full Compliance

All doses exceeding the limits specified in § 835.202 shall be recorded in the affected individual's occupational dose record.

(X) Statutory
( ) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
All doses exceeding the limits specified in § 835.202 SHALL be recorded in the affected individual's occupational dose record.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Article 213.7.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1301(b) End.
When the conditions under which a dose was received in excess of the limits specified in § 835.202, except those doses received in accordance with § 835.204, have been eliminated, operating management shall notify the Head of the responsible DOE field organization.

COMPLIANCE STATEMENT:
When the conditions under which a dose was received in excess of the limits specified in § 835.202, except those doses received in accordance with § 835.204, have been eliminated, operating management SHALL notify the Head of the responsible DOE field organization.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual  CHAPTER 2, Appendix 2A:
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
            MAIN FACILITY

10CFR835: 1301(d)  STATUS: Full Compliance

**Operations after a dose was received in excess of the limits specified in § 835.202, except those received in accordance with § 835.204, may be resumed only with the approval of the DOE.**

( ) Statutory
(X) Mandatory
( ) Guidance

**COMPLIANCE STATEMENT:**
Operations after a dose was received in excess of the limits specified in § 835.202, except those received in accordance with § 835.204, may be resumed ONLY WITH the APPROVAL of the DOE.

**ACTIONS/DOCUMENTS:**
SLAC *RadCon Manual* Chapter 2, Appendix 2A.

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Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1301(d) End.
The risk of injury to those individuals involved in rescue and recovery operations shall be minimized.

COMPLIANCE STATEMENT:
The risk of injury to those individuals involved in rescue and recovery operations SHALL be minimized.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2A.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1302(a) End.
Operating management shall weigh actual and potential risks against the benefits to be gained.

COMPLIANCE STATEMENT:
Operating management SHALL weigh actual and potential risks against the benefits to be gained.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2A.

10CFR835: 1302(b) End.
No individual shall be required to perform rescue action that may involve substantial personal risk.

COMPLIANCE STATEMENT:
No individual SHALL be required to perform rescue action that may involve substantial personal risk.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2A.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1302(c) End.
10/15/1999       STANFORD LINEAR ACCELERATOR CENTER
                MAIN FACILITY

10CFR835: 1302(d)        STATUS: Full Compliance

Each individual authorized to perform emergency actions likely to result in
occupational doses exceeding the values of the limits provided at § 835.202(a) shall be
trained in accordance with § 835.901(b) and briefed beforehand of the known or
anticipated hazards to which the individual will be subjected.

(X) Statutory
( ) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Each individual authorized to perform emergency actions likely to result in occupational
doses exceeding the values of the limits provided at § 835.202(a) SHALL be trained in
accordance with § 835.901(b) and briefed beforehand of the known or anticipated hazards
to which the individual will be subjected.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2 Appendix 2A.

Headquarters Technical Reviewer:    Operations Office Technical Reviewer:

Headquarters Program Reviewer:  Operations Office Technical Reviewer:

Surveillance Number:    Review Number:

10CFR835: 1302(d) End.
Installations possessing sufficient quantities of fissile material to potentially constitute a critical mass, such that the excessive exposure of individuals to radiation from a nuclear accident is possible, shall provide nuclear accident dosimetry for those personnel.

() Statutory
(X) Mandatory
() Guidance

COMPLIANCE STATEMENT:
SLAC does not possess sufficient quantities of fissile material to potentially constitute a critical mass and hence a nuclear accident is not possible.

ACTIONS/DOCUMENTS:
None.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1304(a) End.
Nuclear accident dosimetry shall include the following: A method to conduct initial screening of individuals involved in a nuclear accident to determine whether significant exposures to radiation occurred;

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
SLAC does not possess sufficient quantities of fissile material to potentially constitute a critical mass and hence a nuclear accident is not possible.

ACTIONS/DOCUMENTS:
None.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1304(b)(1) End.
10/15/1999       STANFORD LINEAR ACCELERATOR CENTER
              MAIN FACILITY

10CFR835: 1304(b)(2)       STATUS: Not Applicable

Nuclear accident dosimetry shall include the following: Methods and equipment for
analysis of biological materials;

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
SLAC does not possess sufficient quantities of fissile material to
potentially constitute a critical mass and hence a nuclear accident is
not possible.

ACTIONS/DOCUMENTS:
None.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1304(b)(2) End.
Radiation Protection Program Implementation Plan – 1999 Revision

10/15/1999 STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 1304(b)(3) STATUS: Not Applicable

Nuclear accident dosimetry shall include the following: A system of fixed nuclear accident dosimeter units; and

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
SLAC does not possess sufficient quantities of fissile material to potentially constitute a critical mass and hence a nuclear accident is not possible.

ACTIONS/DOCUMENTS:
None.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1304(b)(3) End.
10/15/1999      STANFORD LINEAR ACCELERATOR CENTER
               MAIN FACILITY (1)

10CFR835: 1304(b)(4) STATUS: Not Applicable

Nuclear accident dosimetry shall include the following:  Personal nuclear accident dosimeters

( ) Statutory  
(X) Mandatory  
( ) Guidance

COMPLIANCE STATEMENT:
SLAC does not possess sufficient quantities of fissile material to potentially constitute a critical mass and hence a nuclear accident is not possible.

ACTIONS/DOCUMENTS:
None.

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1304(b)(4) End.
10/15/1999   STANFORD LINEAR ACCELERATOR CENTER
            MAIN FACILITY

10CFR835: 1AA.I1.01   STATUS: Full Compliance

**Derived Air Concentrations (DAC) for controlling radiation exposure to workers at DOE Facilities.** The data presented in Appendix A are to be used for controlling individual internal doses in accordance with § 835.209,

( ) Statutory
(X) Mandatory
( ) Guidance

**COMPLIANCE STATEMENT:**
The data presented in Appendix A shall be used by SLAC for controlling individual internal doses in accordance with § 835.209,

**ACTIONS/DOCUMENTS:**
SLAC RadCon Manual Chapter 2, Appendix 2D. For the sake of brevity Appendix A is not reproduced for this RPP.

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Headquarters Technical Reviewer:   Operations Office Technical Reviewer:

Headquarters Program Reviewer:   Operations Office Technical Reviewer:

Surveillance Number:   Review Number:

10CFR835: 1AA.I1.01 End.
The data presented in Appendix A are to be used for identifying the need for air monitoring in accordance with § 835.403, and

The data presented in Appendix A WILL be used by SLAC for identifying the need for air monitoring in accordance with § 835.403.

SLAC RadCon Manual Chapter 2, Appendix 2D
The data presented in Appendix A are to be used for identifying and posting airborne radioactivity areas in accordance with § 835. 603(d).

COMPLIANCE STATEMENT:
The data presented in Appendix A WILL be used by SLAC for identifying and posting airborne radioactivity areas in accordance with § 835. 603(d).

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2D
10/15/1999                       STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 1AA.I2.01            STATUS: Full Compliance

The DAC values are given for individual radionuclides. For known mixtures of radionuclides determine the sum of the ratio of the observed concentration of a particular radionuclide and its corresponding DAC for all radionuclides in the mixture. If the sum exceeds unity (1), then the DAC has been exceeded.

() Statutory
() Mandatory
(X) Guidance

COMPLIANCE STATEMENT:
The DAC values are given for individual radionuclides. For known mixtures of radionuclides SLAC will determine the sum of the ratio of the observed concentration of a particular radionuclide and its corresponding DAC for all radionuclides in the mixture. If the sum exceeds unity (1), then the DAC has been exceeded.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2D

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1AA.I2.01 End.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
             MAIN FACILITY

10CFR835: 1AA.I2.02    STATUS: Full Compliance

For unknown radionuclides, the most restrictive DAC (lowest value) for those isotopes not known to be absent shall be used.

(X) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
For unknown radionuclides, the most restrictive DAC (lowest value) for those isotopes not known to be absent SHALL be used.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2D

Headquarters Technical Reviewer:        Operations Office Technical Reviewer:
Headquarters Program Reviewer:          Operations Office Technical Reviewer:
Surveillance Number:                    Review Number:

10CFR835: 1AA.I2.02 End.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
        MAIN FACILITY

10CFR835:  1AC.a.01  STATUS: Full Compliance

**Derived Air Concentrations (DAC) for workers from external exposure during immersion in a contaminated atmospheric cloud.** The data presented in Appendix C are to be used for controlling occupational exposures in accordance with § 835.209,

( ) Statutory
(X) Mandatory
( ) Guidance

**COMPLIANCE STATEMENT:**
Derived Air Concentrations (DAC) for workers from external exposure during immersion in a contaminated atmospheric cloud. The data presented in Appendix C WILL be used by SLAC for controlling occupational exposures in accordance with § 835.209,

**ACTIONS/DOCUMENTS:**
SLAC *RadCon Manual* Chapter 2, Appendix 2E. For the sake of brevity Appendix C is not reproduced for this RPP.

**Headquarters Technical Reviewer:**

**Headquarters Program Reviewer:**

**Surveillance Number:**

10CFR835: 1AC.a.01 End.
10/15/1999          STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835: 1AC.a.02          STATUS: Full Compliance

The data presented in Appendix C are to be used for identifying the need for air monitoring in accordance with § 835.403, and

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The data presented in Appendix C WILL be used by SLAC for identifying the need for air monitoring in accordance with § 835.403.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2E

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1AC.a.02 End.
The data presented in Appendix C are to be used for identifying and posting airborne radioactivity areas in accordance with § 835. 603(d).

COMPLIANCE STATEMENT:
The data presented in Appendix C WILL be used by SLAC for identifying and posting airborne radioactivity areas in accordance with § 835. 603(d).

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2E

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1AC.a.03 End.
The air immersion DAC values shown in this appendix are based on a stochastic dose limit of 5 rems (0.05 Sv) per year or a nonstochastic (organ) dose limit of 50 rems (0.5 Sv) per year. Four columns of information are presented: (1) radionuclide; (2) half-life in units of seconds (s), minutes (min), hours (h), days (d), or years (yr); (3) air immersion DAC units of uCi/ml; and (4) air immersion DAC units of Bq/m$^3$. The data are listed by radionuclide in order of increasing atomic mass. The air immersion DAC were calculated for a continuous, nonshielded exposure via immersion in a semi-infinite atmospheric cloud. The DACs listed in this appendix may be modified to allow for submersion in a cloud of finite dimensions.

( ) Statutory
( ) Mandatory
(X) Guidance

COMPLIANCE STATEMENT:
The air immersion DAC values shown in this appendix are based on a stochastic dose limit of 5 rems (0.05 Sv) per year or a nonstochastic (organ) dose limit of 50 rems (0.5 Sv) per year. Four columns of information are presented: (1) radionuclide; (2) half-life in units of seconds (s), minutes (min), hours (h), days (d), or years (yr); (3) air immersion DAC units of uCi/ml; and (4) air immersion DAC units of Bq/m$^3$. The data are listed by radionuclide in order of increasing atomic mass. The air immersion DAC were calculated for a continuous, nonshielded exposure via immersion in a semi-infinite atmospheric cloud. The DACs listed in this appendix may be modified to allow for submersion in a cloud of finite dimensions.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2E
The DAC value for air immersion listed for a given radionuclide is determined either by a yearly limit on effective dose equivalent, which provides a limit on stochastic radiation effects, or by a limit on yearly dose equivalent to any organ, which provides a limit on nonstochastic radiation effects. For most of the radionuclides listed, the DAC value is determined by the yearly limit on effective dose equivalent. Thus, the few cases where the DAC value is determined by the yearly limit on shallow dose equivalent to the skin are indicated in the table by an appropriate footnote. Again, the DACs listed in this appendix account only for immersion in a semi-infinite cloud and do not account for inhalation or ingestion exposures.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2E
Three classes of radionuclides are included in the air immersion DACs as described below.

(1) **Class 1.** The first class of radionuclides includes selected noble gases and short-lived activation products that occur in gaseous form. For these radionuclides, inhalation doses are negligible compared to the external dose from immersion in an atmospheric cloud.

(2) **Class 2.** The second class of radionuclides includes those for which a DAC value for inhalation has been calculated, but for which the DAC value for external exposure to a contaminated atmospheric cloud is more restrictive (i.e., results in a lower DAC value). These radionuclides generally have half-lives of a few hours or less, or are eliminated from the body following inhalation sufficiently rapidly to limit the inhalation dose.

(3) **Class 3.** The third class of radionuclides includes selected isotopes with relatively short half-lives. These radionuclides typically have half-lives that are less than 10 minutes, they do not occur as a decay product of a longer lived radionuclide, or they lack sufficient decay data to permit internal dose calculations. These radionuclides are also typified by a radioactive emission of highly intense, high-energy photons and rapid removal from the body following inhalation.
also typified by a radioactive emission of highly intense, high-energy photons and rapid removal from the body following inhalation.

10/15/1999           STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835:  1AC.d.       STATUS:  Full Compliance

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ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2E

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Headquarters Technical Reviewer:  Operations Office Technical Reviewer:

Headquarters Program Reviewer:  Operations Office Technical Reviewer:

Surveillance Number:  Review Number:

10CFR835: 1AC.d. End.
The DAC values are given for individual radionuclides. For known mixtures of radionuclides, determine the sum of the ratio of the observed concentration of a particular radionuclide and its corresponding DAC for all radionuclides in the mixture. If this sum exceeds unity, then the DAC has been exceeded. For unknown radionuclides, the most restrictive DAC (lowest value) for those isotopes not known to be absent shall be used.

COMPLIANCE STATEMENT:
The DAC values are given for individual radionuclides. For known mixtures of radionuclides, determine the sum of the ratio of the observed concentration of a particular radionuclide and its corresponding DAC for all radionuclides in the mixture. If this sum exceeds unity, then the DAC has been exceeded. For unknown radionuclides, the most restrictive DAC (lowest value) for those isotopes not known to be absent SHALL be used.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Appendix 2E

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 1AC.e. End.
10CFR835: 1AD.I1 .01

The data presented in appendix D are to be used in identifying and posting contamination and high contamination areas in accordance with § 835.603(e) and (f), and

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The data presented in appendix D WILL be used by SLAC in identifying and posting contamination and high contamination areas in accordance with § 835.603(e) and (f), and

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Table 2.2. For the sake of brevity Appendix D is not reproduced for this RPP.
10/15/1999  STANFORD LINEAR ACCELERATOR CENTER
            MAIN FACILITY

10CFR835:  1AD.II .02  STATUS: Full Compliance

| ( ) Statutory | (X) Mandatory | ( ) Guidance |

COMPLIANCE STATEMENT:
The data presented in appendix D are to be used in identifying the need for surface contamination monitoring and control in accordance with § 835.1101 and 1102.

ACTIONS/DOCUMENTS:
SLAC *RadCon Manual* Chapter 2, Table 2.2

| Headquarters Technical Reviewer: | Operations Office Technical Reviewer: |
| Headquarters Program Reviewer:   | Operations Office Technical Reviewer: |
| Surveillance Number:            | Review Number:                          |

10CFR835: 1AD.II.02 End.
10/15/1999   STANFORD LINEAR ACCELERATOR CENTER
MAIN FACILITY

10CFR835:  1AD.1. 01    STATUS: Full Compliance

The values in this appendix, with the exception noted in footnote 5 below, apply to
radioactive contamination on, but not incorporated into or matrix of, the
contaminated item

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The values in this appendix, with the exception noted in footnote 5 below, APPLY to
radioactive contamination on, but not incorporated into or matrix of, the contaminated
item

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Table 2.2

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 1AD.1. 01 End.
Where surface contamination by both alpha-and beta-gamma-emitting nuclides exists, the limits established for alpha-and beta-gamma-emitting nuclides apply independently.

COMPLIANCE STATEMENT:
Where surface contamination by both alpha-and beta-gamma-emitting nuclides exists, the limits established for alpha-and beta-gamma-emitting nuclides APPLY independently.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Table 2.2
As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.

COMPLIANCE STATEMENT:
As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.

ACTIONS/DOCUMENTS:
SLAC *RadCon Manual* Chapter 2, Table 2.2

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1AD.2. End.
The levels may be averaged over one square meter provided the maximum surface activity in any area of 100 cm² is less than three times the value specified

COMPLIANCE STATEMENT:
The levels MAY be averaged over one square meter provided the maximum surface activity in any area of 100 cm² is less than three times the value specified

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Table 2.2

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1AD.3. 01 End.
For purposes of averaging, any square meter of surface shall be considered to be above the surface contamination value if: (1) from measurements of a representative number of sections it is determined that the average contamination level exceeds the applicable value; or

<table>
<thead>
<tr>
<th>Statutory</th>
<th>Mandatory</th>
<th>Guidance</th>
</tr>
</thead>
</table>

COMPLIANCE STATEMENT:
For purposes of averaging, any square meter of surface SHALL be considered to be above the surface contamination value if: (1) from measurements of a representative number of sections it is determined that the average contamination level exceeds the applicable value; or

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Table 2.2

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1AD.3. 02 (1) End.
For purposes of averaging, any square meter of surface shall be considered to be above the surface contamination value if: or (2) it is determined that the sum of the activity of all isolated spots or particles in any 100 cm² area exceeds three times the applicable value

COMPLIANCE STATEMENT:
For purposes of averaging, any square meter of surface SHALL be considered to be above the surface contamination value if: or (2) it is determined that the sum of the activity of all isolated spots or particles in any 100 cm² area exceeds three times the applicable value

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Table 2.2
The amount of removable radioactive material per 100 cm² of surface area should be determined by swiping the area with dry filter or soft absorbent paper, applying moderate pressure, and then assessing the amount of radioactive material on the swipe with an appropriate instrument of known efficiency. (Note - The use of dry material may not be appropriate for tritium.)

COMPLIANCE STATEMENT:
The amount of removable radioactive material per 100 cm² of surface area SHOULD be determined by swiping the area with dry filter or soft absorbent paper, applying moderate pressure, and then assessing the amount of radioactive material on the swipe with an appropriate instrument of known efficiency. (Note - The use of dry material MAY not be appropriate for tritium.)

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Table 2.2
When removable contamination on objects of surface area less than 100 cm$^2$ is determined, the activity per unit area shall be based on the actual area and the entire surface shall be wiped.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
When removable contamination on objects of surface area less than 100 cm$^2$ is determined, the activity per unit area SHALL be based on the actual area and the entire surface SHALL be wiped.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Table 2.2

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1AD.4. 02 End.
It is not necessary to use swiping techniques to measure removable contamination levels if direct scan surveys indicate that the total residual surface contamination levels are within the limits for removable contamination.

( ) Statutory
( ) Mandatory
(X) Guidance

COMPLIANCE STATEMENT:
It is not necessary to use swiping techniques to measure removable contamination levels if direct scan surveys indicate that the total residual surface contamination levels are within the limits for removable contamination.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Table 2.2

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 1AD.4. 03 End.
10/15/1999 STANFORD LINEAR ACCELERATOR CENTER MAIN FACILITY

10CFR835: 1AD.5. 01 STATUS: Full Compliance

This category of radionuclides includes mixed fission products, including the Sr-90 which is present in them.

() Statutory
() Mandatory
(X) Guidance

COMPLIANCE STATEMENT:
This category of radionuclides includes mixed fission products, including the Sr-90 which is present in them.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Table 2.2

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1AD.5. 01 End.
10/15/1999    STANFORD LINEAR ACCELERATOR CENTER
             MAIN FACILITY

10CFR835: 1AD.5. 02    STATUS: Full Compliance

It does not apply to Sr-90 which has been separated from the other fission products or mixtures where the Sr-90 has been enriched.

( ) Statutory
( ) Mandatory
(X) Guidance

COMPLIANCE STATEMENT:
It does not apply to Sr-90 which has been separated from the other fission products or mixtures where the Sr-90 has been enriched.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Table 2.2

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1AD.5. 02 End.
Tritium contamination may diffuse into the volume or matrix of materials. Evaluation of surface contamination shall consider the extent to which such contamination may migrate to the surface in order to ensure the surface contamination value provided in this appendix is not exceeded.

COMPLIANCE STATEMENT:
Tritium contamination may diffuse into the volume or matrix of materials. Evaluation of surface contamination SHALL consider the extent to which such contamination may migrate to the surface in order to ensure the surface contamination value provided in this appendix is not exceeded.

ACTIONS/DOCUMENTS:
SLAC *RadCon Manual* Chapter 2, Table 2.2

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1AD.6. 01 End.
Once this contamination migrates to the surface, it may be removable, not fixed; therefore, a "total" value does not apply.

COMPLIANCE STATEMENT:
Once this contamination migrates to the surface, it may be removable, not fixed; therefore, a "total" value does not apply.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Table 2.2

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1AD.6. 02 End.
10CFR835: 1AD.7.  STATUS: Full Compliance

(alpha)

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
For the purpose of determining the removable and total contamination values for U-nat, U-238, and associated decay products, as used in appendix D to Part 835, SLAC WILL measure the (alpha) decay activity.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 2, Table 2.2

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

Values for establishing Sealed Radioactive Source accountability and radioactive material posting and labeling requirements. The data presented in Appendix E are used for identifying accountable sealed radioactive sources and radioactive materials areas as those terms are defined at § 835.2(a),

(A) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
Values for establishing Sealed Radioactive Source accountability and radioactive material posting and labeling requirements. The data presented in Appendix E ARE USED for identifying accountable sealed radioactive sources and radioactive materials areas as those terms are defined at § 835.2(a),

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 4, Table 4A. For the sake of brevity Appendix E is not reproduced for this RPP.
The data presented in Appendix E are used for establishing the need for radioactive material area posting in accordance with § 835.603(g).
10CFR835:  1AE.I1.03  STATUS: Full Compliance

The data presented in Appendix E are used for establishing the need for radioactive material labeling in accordance with § 835.605.

( ) Statutory
(X) Mandatory
( ) Guidance

COMPLIANCE STATEMENT:
The data presented in Appendix E ARE USED for establishing the need for radioactive material labeling in accordance with § 835.605.

ACTIONS/DOCUMENTS:
SLAC *RadCon Manual* Chapter 4, Table 4A

Headquarters Technical Reviewer:  Operations Office Technical Reviewer:

Headquarters Program Reviewer:  Operations Office Technical Reviewer:

Surveillance Number:  Review Number:

10CFR835: 1AE.I1.03 End.
Any alpha emitting radionuclide not listed above and mixtures of alpha emitters of unknown composition have a value of 10 microcuries.

COMPLIANCE STATEMENT:
Any alpha emitting radionuclide not listed above and mixtures of alpha emitters of unknown composition HAVE a value of 10 microcuries.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 4, Table 4A

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:
10CFR835: 1AE.I3.  STATUS: Full Compliance

Any radionuclide other than alpha emitting radionuclides not listed above and mixtures of beta emitters of unknown composition have a value of 100 microcuries.

COMPLIANCE STATEMENT:
Any radionuclide other than alpha emitting radionuclides not listed above and mixtures of beta emitters of unknown composition HAVE a value of 100 microcuries.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 4, Table 4A

Headquarters Technical Reviewer: Operations Office Technical Reviewer:
Headquarters Program Reviewer: Operations Office Technical Reviewer:
Surveillance Number: Review Number:

10CFR835: 1AE.I1.03 End.
10/15/1999            STANFORD LINEAR ACCELERATOR CENTER
                        MAIN FACILITY

10CFR835: 1AE.I4.       STATUS: Full Compliance

Note: Where there is involved a combination of radionuclides in known amounts, derive the value for the combination as follows: for each radionuclide in the combination, the ratio between the quantity present in the combination and the value otherwise established for the specific radionuclide when not in combination. If the sum of such ratios for all radionuclides in the combination exceeds unity (1), then the accountability criterion has been exceeded.

( ) Statutory
( ) Mandatory
(X) Guidance

COMPLIANCE STATEMENT:
Note: Where there is involved a combination of radionuclides in known amounts, derive the value for the combination as follows: for each radionuclide in the combination, the ratio between the quantity present in the combination and the value otherwise established for the specific radionuclide when not in combination. If the sum of such ratios for all radionuclides in the combination exceeds unity (1), then the accountability criterion has been exceeded.

ACTIONS/DOCUMENTS:
SLAC RadCon Manual Chapter 4, Table 4A

Headquarters Technical Reviewer: Operations Office Technical Reviewer:

Headquarters Program Reviewer: Operations Office Technical Reviewer:

Surveillance Number: Review Number:

10CFR835: 1AE.I4. End.