NATIONAL ACCELERATOR LABORATORY

ENVIRONMENT, SAFETY & HEALTH DIVISION

Chapter 9: Radiological Safety

Related Programs and Documents

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1 Purpose

The purpose of this document is to provide an overview of the various SLAC programs and documents that make up the SLAC Radiation Protection Program (RPP) and how they relate to Chapter 9, "Radiological Safety". The intended audience is SLAC staff responsible for the RPP and external auditors.

2 Programs and Documents

The exposure of personnel to radiation and the use, storage, handling, and disposal of radioactive materials at the SLAC National Accelerator Laboratory (SLAC) are strictly controlled in accordance with a comprehensive set of regulations, principally Title 10, *Code of Federal Regulations*, "Energy", Chapter 3, "Department of Energy", Part 835, "Occupational Radiation Protection" (10 CFR 835), and directives issued by the Department of Energy (DOE). These regulations and directives are implemented through an extensive set of programs, each with its own set of detailed requirements and documents.

The main program, required by 10 CFR 835, is the SLAC Radiation Protection Program (RPP). The goal of the RPP is to maintain personnel radiation doses below regulatory limits and as low as reasonably achievable (ALARA). RPP requirements apply to all radiological activities, facilities, and operations at SLAC and strictly control any activities that can expose personnel to radiation. Additionally, SLAC policy stemming from DOE directives is to minimize release of radioactive material into the environment and minimize the impacts to the environment from radiological operations.

The implementation hierarchy for the programs that collectively comprise the SLAC radiological safety program is as follows:

- The top-level document is the SLAC National Accelerator Laboratory Radiation Protection Program Plan for Implementing 10 CFR 835, which describes how SLAC meets the requirements of 10 CFR 835. The RPP plan (called the *RPP*) is primarily a regulatory compliance tool rather than an operations-oriented document. It is intended for use by SLAC management and the DOE.
- The SLAC Radiological Control Manual (referred to as the *RadCon Manual*) and Chapter 9, "Radiological Safety", are second-level documents that summarize the RPP and general requirements for third-level documents and the entire program in general. The chapter describes the radiological safety program requirements that apply globally at SLAC and is intended for line management and personnel to meet general program requirements.
- The third-level documents are radiation safety program manuals which, combined with supporting materials such as technical basis documents, procedures, specifications, and memos, provide detailed implementation requirements and guidelines for each of the programs that comprise the radiological safety program. These manuals and supporting materials are intended for SLAC Radiation Protection

Department (RPD) personnel and SLAC personnel who may need to know more details of the radiological safety program. Key examples follow:

- The Radioactive Waste Manual documents a supplementary radiological safety program required by DOE Order 435.1, "Radioactive Waste Management" (DOE O 435.1).
- The Radiation Safety Systems Technical Basis Document specifies the criteria for radiation safety systems and describes the design of systems used at SLAC.
- The Conduct of Accelerator Facility Operations describes how all accelerator operations at SLAC are carried out in a safe and effective manner in compliance with DOE Order 420.2D, "Safety of Accelerator Facilities" (DOE O 420.2D SCP).

3 References

SLAC Environment, Safety, and Health Manual (SLAC-I-720-0A29Z-001)

- Chapter 9, "Radiological Safety"
  - SLAC National Accelerator Laboratory Radiation Protection Program Plan for Implementing 10 CFR 835 (SLAC-I-720-IA05M-002)
  - Radiological Control Manual (SLAC-I-720-0A05Z-001)
  - Radiation Safety Systems Technical Basis Document (SLAC-I-720-0A05Z-002)
  - Radioactive Waste Manual (SLAC-I-760-2A08Z-001)
  - Radiation Protection Program Site (SharePoint)

Other SLAC Documents

- Conduct of Accelerator Facility Operations (CACM-2019-059)

Other Documents

- Title 10, *Code of Federal Regulations*, "Energy", Chapter 3, "Department of Energy", Part 835, "Occupational Radiation Protection" (10 CFR 835)
- Site Compliance Plan for Department of Energy Order 420.2D, "Safety of Accelerator Facilities" (DOE O 420.2D SCP)
- Department of Energy Manual 435.1-1, "Radioactive Waste Management Manual", Change 2 (DOE M 435.1-1, Chg 2 [Admin Chg])